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**Metchley Roman Forts, The University of Birmingham**  
**An Archaeological Assessment 1999**

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# METCHLEY ROMAN FORTS, THE UNIVERSITY OF BIRMINGHAM

## AN ARCHAEOLOGICAL ASSESSMENT 1999

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# METCHLEY ROMAN FORTS, UNIVERSITY OF BIRMINGHAM

## AN ARCHAEOLOGICAL ASSESSMENT 1999

### 1.0: SUMMARY

This report provides an archaeological assessment of Metchley Roman forts, Birmingham, and adjoining areas. For completeness, the assessment includes consideration of areas outside the ownership of the University, both within and immediately adjoining the fort complex. The report provides an integrated summary of the excavated data from the site, and an interpretation and discussion of the evidence. The relevant national and local policies and plans concerning archaeology are summarised. The report assesses the predicted degree of archaeological survival within each of the six zones defined within the fort complex. The survival and significance of archaeological features belonging to each of the six phases is later assessed. The scope of this assessment is not limited to Roman archaeology; the potential for the discovery of archaeology of prehistoric, medieval or post-medieval date is also considered.

Four main phases of Roman activity have been identified at Metchley. The earliest (Phase 1) fort, constructed in the late AD 40s, was roughly square in plan, enclosing 4.08 ha., and was defended by double ditches, a rampart, and other obstacles. The excavated part of the left *retentura* (see Appendix 1 for a glossary of the latin terms used) contained a pair of facing barrack blocks, the northernmost comprising a double barrack-block. Other contemporary buildings excavated include part of a granary (in the central range), and a workshop and store (in the right *praetentura*). Later, ditched annexes were added to the northern, eastern, and possibly also to the southern sides of the fort (Phase 2A). The deliberate clearance of the Phase 1 fort interior was immediately followed by the construction of temporary, irregularly-shaped timber-framed buildings, and associated fenced compounds (Phase 2B). The excavated buildings of this phase include a store building with a raised floor, and a stable or groom's quarters. Although the evidence is fragmentary, the fort may have functioned as a stores depot at this time. 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 fort was probably abandoned by the military around AD 70.

The excavations have provided tantalising evidence for a possible civilian occupation of the site, probably on a very small scale, which may have continued into the 2nd century. The latest feature in the fort interior, a three-sided ditched enclosure, could be associated with the latest Roman activity at the site, or could have functioned as a game pen associated with the post-medieval use of the surrounding area as a hunting park. In the late 18th-19th-century the site was turned over to agriculture, before mostly becoming incorporated into the campus of the University of Birmingham.

## 2.0: INTRODUCTION

### 2.1: The report

This report provides an archaeological assessment of the site of Metchley Roman forts and their immediate surrounds (centred on NGR. SP 044838: Figs. 1-2, Maps 1-13), mostly located within the campus of the University of Birmingham. The study area considered for this assessment includes an area of 50m outside the maximum extent of the forts and the associated military annexes (Maps 1-2). Birmingham University Field Archaeology Unit (BUFAU) were commissioned to undertake the assessment by the Estate Management Office of the University of Birmingham. The aim of the report is to provide an integrated archaeological assessment of the area of the fort complex and its surrounds, 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).

This assessment is based upon information available in May 1999.

### 2.2: Aims

The detailed aims of the assessment are:

- 1) To provide an integrated description and interpretation of the results of previous archaeological fieldwork at the forts.
- 2) To consider the forts within their wider archaeological context.
- 3) To consider the likely extent, survival and significance of the archaeological remains of the forts.
- 4) 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.
- 5) To consider the evidence for both pre-and post-Roman activity at the site.

In particular, it was intended to provide an integrated overview of the significance and archaeological potential of zones within and adjoining the forts complex, to create an overall framework for the future archaeological curation of the monument, replacing the previous strategy which involved an archaeological response on a site-by-site basis. To provide such an overview it has been necessary to include within the study area land outside the ownership of the University of Birmingham (Map 2, Zone 3).

### 2.3: Sources

A number of sources were consulted during the preparation of this assessment, including:

- 1) Previous reports, published and unpublished, concerning the site. The principal source of information were the reports of previous excavations at the site (St. Joseph and Shotton 1937, Webster 1954, Jones forthcoming a), the excavation archive of the 1963-4 and 1967-9 excavations, and the post-excavation assessment of the 1999 excavations (Jones 1999a).
- 2) The Birmingham Sites and Monuments Record (SMR).
- 3) Secondary archaeological and historical sources.
- 4) Air photographs.
- 5) Antiquarian, estate, enclosure and early editions of Ordnance Survey maps.
- 6) Information provided by the Estate Management Office of the University of Birmingham concerning services, topography, and the results of geotechnical investigations.
- 7) Information provided by site inspection.
- 8) Comparative data from other Roman forts.

Appendix 3 provides a detailed listing of the sources.

## **2.4: 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 Bourne 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. 01682A). However, burnt mounds, and scattered chance finds of Bronze Age metalwork found elsewhere in the Birmingham area (e.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 *Dobunii* 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), and 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), 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 cast 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."

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 3, 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 of 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, possibly 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-oblivation 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 1-2, 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; Map 2 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 Sparry (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: Plate 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 (Areas 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 1) 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 2 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 has involved the examination of areas outside the western defences (Jones 1988, 1989, not illustrated), and outside the eastern defences (Atkins 1992, not illustrated). Most recently, areas within and adjoining the southeastern angle of the fort complex have been excavated (Areas 6-7, Map 2) by BUFAU on behalf of the Estate Management Office of the University of Birmingham, in advance of development proposals. These excavations were preceded by desk-based assessments (Jones 1995a, 1995b, 1998a) and trial-trenching (Jones 1996, 1998b, 1999b). The Area 7 investigations (Jones 1999a) identified a hitherto unknown eastern annexe to the forts. Further areas in this part of the fort complex are currently proposed for investigation.

During the period 1963-1998 a total of 5150 square metres was investigated within the interior of the forts, amounting to 10% of the northern annexe interior, and 12% of the Phase 1-2 fort interior.

#### **4.2: Methodology**

Areas 1A-C were sub-divided by parallel baulks. Areas 2-7 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.

#### **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 six 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 military occupation. Section 11.0 outlines a strategy or 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. The criteria employed for the definition of the levels of predicted archaeological survival, and for the assessment of significance, are set down in Appendix 4.

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. The location of the pre-1997 investigations is not always secure.

## **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 1-7 is defined as follows:

Phase 0: Prehistoric.

Phase 1: First fort. AD 40s.

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 annexe. May be contemporary with the later occupation 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, and later, small-scale activity up to AD 120.

Phase 4: Post-Roman activity.

The phasing defined for Area 7 is only preliminary because full post-excavation analysis for that area has not been completed.

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 and 6).

## 6.2: PHASE 0: Prehistoric

No pre-Roman structures or other features were found. Evidence of prehistoric activity was restricted to a total of 10 flint artifacts which suggest some form of activity nearby in the Late Neolithic-Early Bronze Age.

## 6.3: PHASE 1 (AD 40s)

### 6.3.1: Areas investigated (Map 2)

The western side of the Phase 1-2 (and Phase 3) fort defences was tested in Area 1A (no contextual data surviving) and in Area 3A, which provided the only recently dug profile of the Phase 1 rampart. Areas 5 and 5A were excavated to test the relationship between the ditched defences of the northwestern corner of the Phase 1 fort and the Phase 2A northern annexe. The northern side of the Phase 1 defences was tested by two trenches measuring 2m in width (Areas 3B and 4C, no contextual data surviving for the latter), and in Area 1C. The eastern and southern defences were sampled in Areas 7 and 6 respectively.

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

#### Western defences (Area 3A: Map 2)

The western side of the Phase 1 defences comprised two parallel ditches (D1 and D3), dug into the subsoil, approximately 6.5m apart (measured centre to centre), a rampart (R), and a possible outer bank (1). The outer ditch (D3) measured a maximum of 3m in width, and 1m in depth. The innermost ditch (D1) measured a maximum of 4m in width, and 1.8m in depth. A large post-hole or pit (P1), measuring 1.2m in diameter, was cut between the two ditches. A possibly contemporary outer bank, measuring a maximum of 0.8m in height was located at distance of 1m from the outermost edge of ditch D3.

The rampart foundation 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.

#### Northern defences (Areas 5, 3B and 1C: Map 2)

The northwestern angle and the northern side of the Phase 1 fort defences were both defined by two parallel ditches (Area 5, D3 and D1, Fig. 9), dug 6.5m apart (measured centre to centre) into the subsoil. The outermost ditch (D3) measured a maximum of 3m in width, and 1.5m in depth, and was V-shaped in profile. Phase 1 inner ditch D1 was dug away by a Phase 3 re-cut (D1a) along the northern side of the fort. The

northern terminal of a third ditch (D5), measuring 1.2m in width, cut between ditches D3 and D1, was also identified in the extreme south of the area investigated (Area 5A). A layer of clay was deposited between ditches D3 and D1, to artificially raise the intervening ground level. The base of ditch D3 was partially infilled with up to 0.5m of silts during Phase 1.

A northeast-southwest aligned beam-slot (S1) 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 (PH1).

#### Eastern defences (Area 7: Map 2)

The outermost, north-south aligned ditch of the Phase 1 fort (F102) measured a maximum of 1.2m in depth, but its full profile was not obtained because of truncation by later ditch F106 (Phase 3).

#### Southern defences (Area 6: Map 2)

The southern side of the Phase 1 defences also comprised two parallel ditches (F406, F416), dug 6.5m apart (measured centre to centre), in an area subject to considerable modern disturbance. The outermost ditch (F406) was cut by a modern land-drain (F420), and its full profile could not be obtained. The innermost ditch (F416) was of V-shaped profile, measuring a maximum of 4m in width and 1.5m in depth, with a basal cleaning slot. A layer of clay, which survived to a maximum height of 0.3m, had been deposited between the ditches to raise the intervening ground surface.

#### 6.3.3: Interpretation of the Phase 1 defences

The fort was defended on all sides by double ditches, although only the outermost ditch was recorded on the eastern side (Area 7). 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 of the two ditches 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.

A palisade, represented by ditch D5 and pit P1 may have provided an additional line of defence on the fort's western side. 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 also along the southern side of the fort. Another defensive obstacle on the southern side of the fort may have been provided by a counterscarp bank (e.g. Jones 1975, 106) a feature possibly more extensively recorded as an earthwork in historical maps. This feature could be interpreted as a *titulum*, intended to protect the *porta principalis dextra*. Alternatively, this undated earthwork at Metchley could amount to no more than a positive lynchet on the eastern side of a post-medieval field boundary (Figs. 6-8).

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 (Area 5, Fig. 9), in the northwestern angle of the fort interior, could indicate that it formed the outermost side of a corner tower, although this interpretation is necessarily uncertain since no other possible Phase 1 fort corner tower locations has been investigated at Metchley. 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).

The basal silts recorded in the Phase 1 ditches at the northwestern corner of the fort may represent no more than a season's accumulation of material. The ditches continued to be re-cut into Phases 2A-B.

#### 6.3.4: Description of Phase 1 Internal Features

##### Areas investigated

Areas 3-4 investigated part of the left *retentura*, Area 2 part of the right *praetentura*. Area 6 examined part of the southern *intervallum* space.

##### Areas 3-4 (Map 2, Fig. 10)

Preservation of Phase 1 features and 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 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, Plate 5)*

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 a Phase 3-4 ditch, and by a modern drain (not illustrated) fortuitously 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 southward 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, and the narrower part of the corridor lay to the north 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 westward continuation of the midrib recorded to the east (S5, S13, S42).

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

Three large sub-circular 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 pits were cut to the north of Structure 3.1, and also along the line of the western corridor of Structure 4.1.

#### Area 2 (Map 2)

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, Plate 6)

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) were 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 the 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, hearths, 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.

#### Area 6 (Fig. 12)

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

#### 6.3.5: 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 Carrowborough (Breeze 1972, 92) and Longthorpe (Frere and St. Joseph 1974, fig. 17).

Each *contubernium* was divided into two rooms, the *arma* (Appendix 1, rooms 1,3, 5 north), located towards the front of the building, adjoining the verandah, used for equipment storage, and the *papillio* to the rear (rooms 2, 4, 5 south), 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 *arma* and *papillio* (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 the same (Johnson 1983, 171). An unusual feature of the two *arma* (rooms 1 and 3) is their sub-division by partitions, which probably marked a later re-

arrangement of the building, also recorded in one *papillio* (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 XX legion, also recorded 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 westward continuation of the longitudinal dividing wall, along which were 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*, 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 (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 Carrowborough (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 (Schönberger 1969, fig. 17), 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 2 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.

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 *arma*, and the innermost rooms formed *papillia*.

The Structure 3.1 and Structure 4.1 *contubernia* shared two unusual characteristics: the size predominance the *arma* (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 *papillio*. 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 *papillio* 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 *papillio* (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 westward continuation of the verandah (S51), although only fragmentarily recorded, could be inconsistent with this interpretation, since the front of the officer's 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 officer's 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), possibly be represented at Metchley by the incompletely excavated eastern unit. A more usual arrangement was to house beadmaking hearths in the *intervallum* space, and to have an independent *fabrica*.

#### 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 placement 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*, 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 proximity to the excavated *fabrica* (Structure 2.1) to the north, suggests that it may interpreted as a store building.



## Area 6 (Fig. 12)

Although heavily truncated, the form of the Phase 1 or 2 pit group, and their charcoal-rich and burnt clay fills, suggests this feature group may be interpreted as hearth-pits, possibly located within the *intervallum* space.

### 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 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 annexe. 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

##### Areas investigated (Map 2)

Area 5 was cut to test the relationship between the ditches defining the northwestern corner of the Phase 1 fort and the Phase 2A northern annexe (Areas 5, 5A). The eastern and northern sides of the northern annexe were not investigated between 1963 and 1997, nor was the northern annexe rampart. Area 7 investigated part of the eastern annexe defences and interior. Area 1C investigated part of the northern annexe interior.

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

###### 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 northward 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 of the latter feature. The outermost Phase 2A ditch (D4) was V-shaped in profile, and measured a maximum of 2m in width and 0.9m in depth. The contemporary innermost ditch (D2) was also V-shaped in profile, with a basal cleaning slot, measuring a maximum of 2.5m in width and 1m in depth. A length of Phase 1 ditch D3 between Phase 2A ditches D2 and D4 was deliberately backfilled with subsoil, sealed with turf packing, presumably during the excavation of the adjoining annexe ditches.

### Eastern annexe (Area 6, Fig. 13)

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 re-cut being cut 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 (1419) sealed by material derived from rampart collapse (1417-8). The eastern side of this ditch was dug-away by the first re-cut ditch (F201), which was backfilled with rampart collapse (1416). 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 (1415), sealed by clay (1414), and overlain by rampart collapse (1413).

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 features (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 mis-aligned ditches. These two ditches were separated by an entry-gap measuring approximately 10m in width, fortuitously coinciding with a broad ice-wedge filled with gravel (not illustrated). A further ditch (F128) was cut further to the east, following the line of the natural contours of the slope, but slightly mis-aligned with the annexe defences. Ditch F128 also appeared to be cut across the line of the entrance gap between ditches F167 and F205.

#### 6.4.1.2: Interpretation of Phase 2A/B 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 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. 13)

The eastern annexe, along with the northern annexe and the possible southern annexe is attributed to Phase 2A/B. 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 the 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 mis-aligned 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.

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

No contemporary internal features were identified in the interior of the northern annexe despite the stripping of approximately 1300 square metres (Pretty 1969: Map 2), 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.

### 6.4.2: PHASE 2B

#### Areas investigated (Map 2)

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 (Area 6) sides of the Phase 1-2 fort.

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

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. Along the western, northern and eastern sides of the fort the sequence of Phase 2B backfills was similar: the primary fills were sand-silts derived from weathering of the ditch sides and were sealed by destruction deposits, including burnt daub, sealed by sand, interpreted as demolished rampart material.

The outermost ditch (D3) along the northern side of the Phase 1-2 fort may have been re-cut in Phase 3, since no trace of the basal silts were found in this ditch.

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 2)

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 part of the southern *intervallum* space (Area 6).

## 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 into 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. 14)*

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 a L-shaped stake-hole alignment (C7 F3), partly set within a slot dug into the clay floor (C7 F2).

### *Structure 3.5 (Fig. 14)*

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 were identified, but the 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.

fig. 129), Kunzing (Schönberger 1969, fig. 17), 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 Fig. 3 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.

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 *arma*, and the innermost rooms formed *papillia*.

The Structure 3.1 and Structure 4.1 *contubernia* shared two unusual characteristics: the size predominance the *arma* (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 *papillio*. 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 *papillio* 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 *papillio* (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 westward continuation of the verandah (S51), although only fragmentarily recorded, could be inconsistent with this interpretation, since the front of the officer's 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 officer's 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), possibly be represented at Metchley by the incompletely excavated eastern unit. A more usual arrangement was to house beadmaking hearths in the *intervallum* space, and to have an independent *fabrica*.

## 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 placement 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*, 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 proximity to the excavated *fabrica* (Structure 2.1) to the north, suggests that it may be interpreted as a store building.

## Area 6 (Fig. 12)

Although heavily truncated, the form of the Phase 1 or 2 pit group, and their charcoal-rich and burnt clay fills, suggests this feature group may be interpreted as hearth-pits, possibly located within the *intervallum* space.

### 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 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 annexe. 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

##### Areas investigated (Map 2)

Area 5 was cut to test the relationship between the ditches defining the northwestern corner of the Phase 1 fort and the Phase 2A northern annexe (Areas 5, 5A). The eastern and northern sides of the northern annexe were not investigated between 1963 and 1997, nor was the northern annexe rampart. Area 7 investigated part of the eastern annexe defences and interior. Area 1C investigated part of the northern annexe interior.

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

###### 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 northward 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 of the latter feature. The outermost Phase 2A ditch (D4) was V-shaped in profile, and measured a maximum of 2m in width and 0.9m in depth. The contemporary innermost ditch (D2) was also V-shaped in profile, with a basal cleaning slot, measuring a maximum of 2.5m in width and 1m in depth. A length of Phase 1 ditch D3 between Phase 2A ditches D2 and D4 was deliberately backfilled with subsoil, sealed with turf packing, presumably during the excavation of the adjoining annexe ditches.



### Eastern annexe (Area 6, Fig. 13)

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 re-cut being cut 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 (1419) sealed by material derived from rampart collapse (1417-8). The eastern side of this ditch was dug-away by the first re-cut ditch (F201), which was backfilled with rampart collapse (1416). 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 (1415), sealed by clay (1414), and overlain by rampart collapse (1413).

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 features (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 mis-aligned ditches. These two ditches were separated by an entry-gap measuring approximately 10m in width, fortuitously coinciding with a broad ice-wedge filled with gravel (not illustrated). A further ditch (F128) was cut further to the east, following the line of the natural contours of the slope, but slightly mis-aligned with the annexe defences. Ditch F128 also appeared to be cut across the line of the entrance gap between ditches F167 and F205.

#### 6.4.1.2: Interpretation of Phase 2A/B 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 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. 13)

The eastern annexe, along with the northern annexe and the possible southern annexe is attributed to Phase 2A/B. 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 the 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 mis-aligned 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.

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

No contemporary internal features were identified in the interior of the northern annexe despite the stripping of approximately 1300 square metres (Pretty 1969: Map 2), 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.

### 6.4.2: PHASE 2B

Areas investigated (Map 2)

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 (Area 6) sides of the Phase 1-2 fort.

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

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. Along the western, northern and eastern sides of the fort the sequence of Phase 2B backfills was similar: the primary fills were sand-silts derived from weathering of the ditch sides and were sealed by destruction deposits, including burnt daub, sealed by sand, interpreted as demolished rampart material.

The outermost ditch (D3) along the northern side of the Phase 1-2 fort may have been re-cut in Phase 3, since no trace of the basal silts were found in this ditch.

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 2)

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 part of the southern *intervallum* space (Area 6).

## 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 into 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. 14)*

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 a L-shaped stake-hole alignment (C7 F3), partly set within a slot dug into the clay floor (C7 F2).

### *Structure 3.5 (Fig. 14)*

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 were identified, but the 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. 14)*

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

### *Later Phase 2B features (Fig. 14)*

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 backfilled with red clay. 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. 14)*

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 disturbance. 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 cut in the southeast corner of the enclosure, and also extending immediately outside, 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. 14)*

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 2)**

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.

#### **Area 7 (Fig. 13)**

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. Gullies 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).

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

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, and into backfilled Phase 1 features and underlying subsoil. Other contemporary features included post-holes, pits and gullies.

### *Structure 2.3 (Fig. 15)*

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 ends of this structure lay outside the area excavated in detail. The northern side of this building was formed by slot F178, and its southern side was formed by slot F183. The eastern and western excavated sides of the building were formed by slots F188 and F182 respectively. The centreline of this building was defined 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**

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 interpretations, including examples of structures found in civilian contexts.

## Buildings

### *Structure 3.4 (Fig. 14)*

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 roof of wicker, set in clay, the base 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. 14)*

As with other contemporary buildings, Structure 3.5 was partly formed by the re-excavation of Phase 1 beam-slots (S37, S10), as at Baginton where Phase 2 structures incorporated elements of their Phase 1 predecessors (Hobley 1975, 15). This superimposition 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 slots as supports for a raised floor.

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

#### Hearths or ovens (Fig. 14)

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). 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, similar in morphology to the Metchley examples, from Derby 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 1985, 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).

#### 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 were 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 7 (Fig. 13)

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 (e.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.

### Area 2

#### *Structure 2.3 (Fig. 15)*

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 building sub-divided into small 'rooms' (Davison 1989, fig. A, type R building). Stables at Strageath (building II, Frere and Wilkes 1989, 124), and Brough-on-Noe were very similar in width to the Metchley building, with an allowance of 2.7m per horse lengthways proposed at the latter site (Jones and Wild 1968, 89-93). 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.

#### 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

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: Areas investigated (Map 2)

All four sides of the Phase 3 fort defences (Map 2) were examined between 1963 and 1997. The western side was examined in Areas 1A, 3 and 4A; the northern side in Areas 3A, 4, 4B, 3C and 4D; the eastern side in Area 2; and the southern side in Area 6. Area 4D also tested the northern Phase 3 fort gateway. Areas 2, 3, 4 and 6 were open area excavations; the remainder of the interventions were trenches measuring approximately 2m wide. No records survive for Area 1A.

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

##### Western defences (Areas 3, 3A, 4A)

The western defences of the Phase 3 fort comprised a single, north-south aligned ditch (D6, Plate 7) and a rampart, constructed overlying the Phase 2B destruction deposit. In Area 3A ditch D6 was cut to a V-shaped profile, with a basal cleaning-slot, and measured a maximum of 3.8m in width and 1.2m in depth. A pit (P2) cut on the inside face of ditch D6 may have formed part of a palisade.

In Area 3/3A the rampart 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. 16, 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, and surviving as dark organic stains. A post-hole (PH1) cut outside the rampart may have been associated. 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) dug 2.1m apart, and measuring an average of 0.6m in diameter. Two roughly circular post-pits (C5 P1, C6 P1), cut 2.85m apart, were dug to the rear of the Phase 3 rampart.

The western ditch (D6, Area 3A) was backfilled with layers of sand and silt (21-23), sealed by destruction deposits (24-5), including collapsed turf from the rampart, and brown clay-sand (25), containing patches of red and grey sand, burnt clay and daub, which also sealed the rampart (20). Near the northwestern corner of the fort (Area 4A, Fig. 16) the basal silt fills of ditch D6 (1-4) were sealed by a destruction deposit (5) containing daub and charcoal.

#### Northern defences (Areas 5, 4, 4B, 3B, 3C, 4D)

The northern defences of the Phase 3 fort were formed by an east-west aligned ditch (D6) and rampart, supplemented by a re-cut (D1a) of the innermost northern Phase 1-2 ditch (D1: Fig. 9, Area 3B). Ditch D1a measured a maximum of 4m in width and 0.9m in depth. Ditch D6 was cut to an irregular, V-shaped profile, measuring a maximum of 2m in width and 1m in depth. An oval pit (Area 4B: Fig. 14, Y0 P1) dug on the inside of ditch D6 may have defined part of a palisade.

Just beyond the northwestern corner of the defences (Fig. 16, Area 4) the Phase 3 rampart overlay Phase 1-2B features and deposits (22-32). The 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 horizons of laid turf (37-39). In Area 3C, to the east (Fig. 16), 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, 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).

Two post-holes dug 2.1m apart (Fig. 14, F0 P1-2) formed part of the frontal revetment of the northern rampart, a continuation of the similar arrangement also recorded on the fort's western side; the post-holes on both sides of the fort were also cut with a similar

separation. A rectangular post-pit (I0 PH1, Fig. 14), cut just to the rear of the rampart tail, was probably associated.

#### *Structure 4.2 (Fig. 14)*

This structure, formed by five parallel, north-south aligned beam-slots (S8, S10, S11, S3, S15), identified to the rear of the northern rampart tail 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. The northern ends of beam-slots S3 and S10 terminated in post-holes.

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

Area 4D (Map 2) 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).

Ditch D6 was backfilled with silts, sealed by destruction material, overlain by sand, derived from the slighting of the rampart. The Phase 3 re-cut (D1a) was backfilled with a similar sequence of deposits.

#### Eastern defences (Areas 7 and 2, Map 2)

##### Eastern annexe (Area 7, Fig. 13)

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 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 re-cutting (F106) of the outermost backfilled ditch of the Phase 1 fort (F102) may also belong to Phase 3. The re-cut was cut into the southwestern edge of backfilled ditch F102. The Phase 3 ditch was dug to a stepped, V-shaped profile, and measured a maximum of 1m in depth. The re-cut ditch was backfilled with silt-sand-clay (1037), sealed by sand-silt (1035), overlain by sand-silts (1033, 1030-2), the latter interpreted as collapsed rampart material.

### Phase 3 fort (Area 2, Fig. 15)

The eastern defences of the Phase 3 fort were formed by a north-south aligned ditch and rampart. Ditch F161 was cut through the infilled features belonging to Phases 1-2B, and into the underlying subsoil. The ditch was V-shaped in profile, measuring a maximum of 3m in width and 1.2m in depth. The rampart (F154) measured 3.3m in width, survived to a height of 0.1m, and 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, braced in a triangular arrangement. One complete bracing (F157-F159) and part (F155-6) of a second were excavated. Although only a short length of the rampart was investigated, it may be suggested that these triangular bracings alternated between examples facing inwards (F157-60), and outwards (F155-6). The basal fills of ditch F161 were alternate layers of silt and sand (1-5). Above was a layer of sand (6), representing the deliberate destruction of the rampart.

### Southern defences (Area 6: Fig. 12)

The southern side of the Phase 3 defences was defined by east-west aligned ditch F400, and a rampart which did not survive as an above-ground feature here because of modern disturbance. The ditch was V-shaped in profile, and measured a maximum of 4.25m in width and 1.5m in depth. 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.

The fill sequence in ditch F400 comprised basal silts, sealed by a destruction deposit, overlain by further silts. Above was a layer of collapsed rampart material, dumped into the ditch on the abandonment of the fort.

### 6.5.3: Interpretation of Phase 3 defences

#### Western defences (Area 3/3A)

In contrast to the Phase 1-2 fort, the Phase 3 fort was mostly 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 (Area 3A: Fig. 6), towards the lower end of the size range (3.7 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 increase the size of the ditch, and cut into the berm, since 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 1m (Area 3A) and 0.7m (Area 3, S2, 19-20, Fig. 16) was recognised along the western side of the fort. 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). These narrow turf cheeks are paralleled at Pen Lystyn (Hogg 1968, 133), Chesterton and Brough on Humber (Jones 1975, 81). 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 frontal revetment was subsequently cut back to insert the timber revetment represented by the post-hole alignment. 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, 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, and the original, turf revetted rampart would have been cut-back at this time. The timber revetment was formed by uprights dug at a separation of 2.1m (Fig. 14), dug into the subsoil to provide increased stability, which would have retained timber uprights extending up to the level of the parapet walkway (e.g. at Baginton, Hobley 1969, fig. 8). 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. 14), 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).

#### Northern defences (Areas 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, possibly intended to compensate for the fort's northern side being overlooked by higher ground - a common feature (Jones 1975, 109). This re-cutting of the northern defences of the Phase 1 fort provides an explanation for the siting of the Phase 3 fort closer to the northern than the southern side of the Phase 1-2 fort, but equidistant from the other sides of the earlier fort.



The subsequently inserted timber revetment along the northern rampart was complemented by a rearward supporting structure (Fig. 14, 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 I0 PH1 (Fig. 16) 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, or, alternatively, if it functioned merely as a further, outer defensive ditch to the Phase 3 fort.

The re-cut (F106) of the outermost, eastern Phase 1-2 fort ditch F102 can be confidently ascribed to Phase 3. The re-cut post-dates the deliberate backfilling of the Phase 1 ditch (F102) with material derived from the slighting of the Phase 1 rampart, an event ascribed elsewhere in the fort to the end of Phase 2B, just before the first military abandonment of the site. By analogy with the evidence for the northern and southern annexes at Metchley it is presumed, but not proven, that the eastern annexe originally joined the Phase 1 fort defences, forming an uninterrupted defensive perimeter. Since the Phase 3 fort was cut 35m inside the line of the earlier fort, a 'gap' of this size may have been created between the defences of this latest fort and the defensive perimeter of the eastern annexe. Re-cut ditch F106 may have been intended to define the western side of the annexe in Phase 3, to 'close' the defensive circuit of the eastern annexe. If this interpretation is correct, the eastern annexe would have been physically independent of the Phase 3 fort.

Since the full length of the eastern annexe defences, and the exact positions of its southern and northern sides, remain to be established, it is also possible to speculate that the eastern annexe formed the eastern side of a larger, L-shaped annexe, joining the southeastern corner of the southern annexe. This alternative interpretation is not inconsistent with the interpretation of ditch F106 as forming the western side of the eastern annexe in Phase 3.

## Area 2 (Fig. 15)

The eastern rampart was 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. 15). 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).

## Southern defences (Fig. 13)

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.

### 6.5.4: Description of Phase 3 Internal Features

#### Areas investigated (Map 2)

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

#### Areas 3-4 (Fig. 14)

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 hearths 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), were located to the rear of the northern rampart.

Perhaps the latest Phase 3 feature was a gully (Enclosure 3, S17: Fig. 14), defining three sides of an enclosure; the southern side was open. 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 partly located outside the area investigated. The enclosure measured approximately 22m north-south and 27m east-west.

## **Area 2**

### *Structure 2.4*

Structure 2.4 (Fig. 15) 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), the southern 4m in width.

The northern unit may have contained paired rooms of unequal size, although only one pair was excavated. A north-south aligned corridor was located on the western side of this unit. 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, cut to the west of Structure 2.4, may have drained the innermost edge of the *via sagularis*.

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

The Phase 3 internal features in this area comprised hearth-pits, ovens and gullies, cut into the subsoil (4037), located 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, which was in turn truncated by a modern test-pit. The northern arm of the gully (F412) was more irregular in plan and profile, and terminated in a tapered butt-end. Two other gullies (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 gullies 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).

A later episode of Phase 3 activity is represented by the excavation of two adjoining pits (F417, F426). 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).

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

##### Areas 3-4 (Fig. 14)

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 respected later (also by Phase 3 Structure 4.2). Structure 2.4 was located between the rampart and the presumed location 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 *papillio*, 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 4 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).

## Area 6

The features investigated here lay within the southern *intervallum* space, and were probably associated with breadmaking, as is indicated by the evidence of the associated charred plant remains, and the very small quantity of ironworking slag recovered, although it has been noted above that some ironworking processes, such as smithing, produce little if any slag (Bestwick and Cleland 1974, 143-5). Of particular interest is the pottery of Flavian-Trajanic date from pits F426 and F417.

## 6.6: PHASE 4, Post-Roman activity

### Description and Interpretation

#### Area 7 (Fig. 13)

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, although 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 2). 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: DISCUSSION

This section of the report provides a review and discussion of the data from the excavations of 1963 to 1969 and 1997 (Jones forthcoming a), also drawing on evidence from earlier fieldwork at the site (St Joseph and Shotton 1937, Webster 1954), and post-1997 excavations at Metchley, which will be published in detail subsequently (Jones in preparation).

### 6.7.1: PHASE 0: PREHISTORIC

Evidence for prehistoric activity was limited to flint artifacts of Neolithic-Bronze Age date, recovered from later contexts. This evidence 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). This artifactual evidence, and the group of burnt mounds, do not attest settlement *in situ*, 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 and Hodder forthcoming).

There is no known Iron Age context for Metchley and the surrounding area. Only three, residual sherds of Iron Age pottery have 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.

### 6.7.2: PHASE 1 (Map 2)

Introduction and location (Figs. 1-2)

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

Metchley forts were located, as recommended by 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. The siting of the Metchley fort and its orientation could suggest its immediate military objective was the Iron Age hillfort at Wychbury Hill, a site occupied during the Roman period

## Defences (Map 2, Fig. 9)

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, a palisade, and the possible counterscarp bank and/or *titulum* on the western side of the fort 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 they were intended to enclose, which 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 through the life of the fort will tend to erode 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 *orta 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. 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*. The larger than average width of this barrack-block

was also reflected in the large size of the *contubernia*, which were larger than the average size range suggested by Davison for auxiliary barrack-blocks, 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). The size predominance of the *arma* (61% to 39%) is suggested by Davison (1989, 15, 94) to be more usually a feature of auxiliary barracks.

Rooms 1, 3 and 4 were divided by partitions, and a group of timber-lined pits were inserted into room 2. Corridors may have been inserted along the eastern sides of rooms 3 and 5, and the internal dividing wall in the latter room was probably demolished at this time. The partitions inserted into the *contubernia* could have formed the bases of cupboards or benches, or suggest the adaptation of the rooms for a possible storage function, as is also suggested by the group of timber-lined pits in room 2. It may also be suggested that the whole of the excavated part of the building was converted for storage contemporaneously, although this cannot be proven. The corridor inserted along the eastern side of room 5 may have been intended to improve access within or through the building.

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 XX 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 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), or by three *contubernia* (rooms 1-5). The implications of this reduction in barrack accommodation are twofold, not only underling the need for specialist accommodation, presumably for storage, but also the concomitant reduction in the contemporary garrison, illustrated by the reduction in the number of *contubernia* available for accommodation in Structure 3.1, or possibly even the total conversion of the building for storage.

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

The northern part of Structure 3.2, a granary, 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. Although the two 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.

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

Structure 4.1 formed the northernmost barrack-block of the pair (with Structure 3.1). 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, defining three independent structural units.

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 *pila*, 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.

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 *sesquiplicarius*) may have been housed elsewhere in the barrack-block. The overall size, and the relative size of the *arma* and *papillio* 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 their 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 *arma* (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.

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 XX legion, although its wide distribution, including an example at Wroxeter associated with the XIV legion, is interpreted by Davison (1989, 24, 82), as a feature of early cohort barrack planning in England, not necessarily confined to the XX legion.

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 *turma*, and their *decurions*, making a total of eight *turma*. This would amount to half of the complement of 16 *turma* 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 *arma* 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), with cavalry, or both. Webster notes that the only copper alloy item of possibly legionary association is a scabbard mount (Fig. 23.12). The identification of wall-sided mortaria at Metchley, associated with the XIV 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).

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

Structure 2.1 was interpreted as a workshop because of its association with 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 with 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* in 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 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: PHASE 2 (Map 2)

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 (and possibly the 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 ongoing campaign. The eastern annexe was also mis-aligned with the Phase 1 fort.

Further annexes have been identified along the eastern and also possibly the southern sides of the Phase 1 fort. These latter two annexes may have joined, forming an L-shape along the eastern and southern sides of the fort (Jones 1998b, 1999a and in preparation), although these features remain to be fully investigated.

#### Phase 2B internal features

The other main element of Phase 2 activity were 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 - the apparently irregular layout, and the suggested temporary nature of their construction, perhaps suggesting a civilian association - being opposed by 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, which appears to support the argument for the military nature of continuing site occupation.

The earliest of the sub-phases of activity identified comprised the excavation of timber-framed buildings. Although constructed 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 quntana*, 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 used for ironworking, and later re-used as the base of a granary. The most probable interpretation of Structure 3.5 is 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.

#### 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 part of an arrangement of buildings and lean-to sheds as at 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 excavated. The placement of a number of hearths/ovens within the inner walls of the enclosure suggests an association, although this may not necessarily be the original function of the enclosure.

Structure 2.3 was interpreted as forming a combined stable/groom's quarters. It is possible to re-interpret this building as 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 *papillio*, 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 *papillio*, and the presence of open-sided rooms is unexpected in a barrack-block.

#### Function of the Phase 2B fort

Excavation was insufficient to suggest an overall layout of 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 ongoing 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, as is discussed above.

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, although constructed following an Iron Age building tradition such as those excavated by Garton (1988, 64) at Dunston's Clump, Nottinghamshire. These buildings were defined by lines of small post or stake-holes, representing the wattle walls which carried the weight of the roofs. Despite the undoubted 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), structures alternatively interpreted by Frere to have housed hostages or native militia. Two incompletely excavated concentric circular gulleys (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 above 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 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 1963, 56), which produced coins and pottery dated AD 50-75, and the fort at Bleachfield Street, Alcester (Booth 1994, 164-5), at 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).

#### 6.7.4: PHASE 3 (Map 2)

##### Defences (Figs. 9, 16)

The re-establishment of a fort at Metchley in this phase suggests the strategic value 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.

Measuring 2.6 ha. in extent, the Phase 3 fort belongs to a group of forts in the range 2.2-2.8 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 reconstruction 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 was this side and the southern side which were subsequently reconstructed with the stronger, box-rampart. The box rampart varied in width between 3.3m (eastern side), and 4m (southern side), which may reflect the differing rampart heights of 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

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 were built on ground-fast timber beams (e.g. Whitchurch, Jones and Webster 1969, 211) at Metchley, leaving no trace at excavation, possibly also because of plough truncation.

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. 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.

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 was abandoned by AD 70. 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 Wall was abandoned in the AD 80s (Round 1983, 14). Later 1st-century military activity was concentrated in the north midlands, for example at Rocester (Phase 1A, Esmonde 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 Droitwich, at Dodderhill, 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).

#### **6.7.5: 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 70, 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 and 3. Most of the samian is pre-Flavian, with little Neronian-Flavian material found, and only one sherd being 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 70. 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, is an indicator of an early military presence, as is the absence of ring-necked flagons, a typically Flavian type, and the presence of Hofheim flagons.

The earliest brooch from the site (No. 8, Hod Hill), 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 Septimius is dated no earlier than AD 90, and possibly in the range AD 90-130. The absence of Black Burnished ware I forms suggests the 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, in the fine wares, mortaria, amphora, and the range of continental sources, than Wroxeter. The vessel classes noted at Wroxeter but absent at Metchley comprise cups, honey pots and lamps.

Metchley appears to confirm 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 are 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.

#### 6.7.6: POSSIBLE CIVILIAN SETTLEMENT

This section considers the evidence for a civilian settlement at Metchley, presently limited to a group of unstratified copper alloy artifacts identified by Webster (forthcoming) as civilian in association, and a small group of finds which may post-date the suggested military abandonment of the site. The finds associated with civilian settlement include a coil of wire, loops, including loops associated with clothing, a small open ring, possibly for a child, lengths of bronze sheathing forming a handle or the beam of a pair of scales, and a sickle-shaped piece resembling the votive models found on religious sites. Assuming a date around AD 70 for the military abandonment of the site, the later artifacts, none of which is demonstratively civilian in association, include a worn coin of Domitian (dated AD 84-6), rusticated ware dated AD 80-120, a mortarium of Septimius dated AD 90-120, and possibly some of the brooches. It is unlikely, although not impossible, that this latter group of material was deposited by a demolition gang (compare Baginton, AD 78-80, Hobley 1973, 32).

Most of these finds are best considered unstratified. However, the copper alloy ‘civilian’ finds recovered from Trench 1A could have been associated with a group of stake-hole alignments found in that trench, features recorded more extensively in Areas 3-4. If an association was proven between this finds group and the stake-hole alignments, which is not possible on the present evidence, this could suggest that the Phase 2B activity was essentially civilian in character. Although the morphological similarity of the Phase 2B structures with features found within farmsteads and farm compounds of purely civilian association (e.g. Garton 1988), has been noted above, civilian occupation at Metchley is unlikely unless the area was relinquished from the *ager publicus* (Sommer 1984, 51). The presence of a civilian conscripted labour force at the site, as suggested by Bidwell at Vindolanda (Bidwell 1985) is highly unlikely since such *numeri* were only raised from the late 1st-century (Johnson 1983, 25).

The absence of black burnished ware suggests that all activity at the site had ceased by around AD 120. Any civilian settlement at Metchley could at best be considered short-lived. It is possible to suggest that the suggested ‘civilian’ and ‘late’ artifact

groups together indicate that the military occupation of the site was sufficiently long-lived for a settlement to become established, a pre-condition for the development of such a settlement defined by Burnham and Wachter (1990, 8). The same authors identify two further factors necessary for the continuance of such a settlement, namely the economic potential of the site in the existing trade network, and its accessibility from the contemporary road network - which may have been fulfilled at Metchley. The dwindling, and possibly more short-lived, military presence in Phases 2 and 3, and the intervening period of military abandonment of the site may have severely limited its economic potential, even though the site was located close to, or at a major road junction. In contrast settlements at Wall (Gould 1964, Jones 1998c), Mancetter (Scott 1992), and Greensforge (Jones forthcoming b), thrived in roadside locations, with further impetus to economic growth being provided by *mansiones* (Black 1995), most notably at Wall (Round 1992), at intervals along the major roads, and by the exploitation of local resources (e.g. clay for potting at Mancetter-Hartshill).

Later Roman activity in the Birmingham area is represented by the roadside settlement at Parson's Lane Kings Norton, by pottery kilns, and more widely by chance finds of metalwork and pottery. The roadside settlement (SMR No. 2939), consisted of gravel surfaces, associated with clay and daub deposits, 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.

The present very limited evidence for civilian settlement at Metchley may merely reflect the restricted areas outside the defences which have been investigated (Jones 1988, 1989; Atkins 1992), or the extensive recent disturbance of the remaining areas. It is also possible that the civilian settlement at Metchley may have been located at some distance from the forts, as at Kinvaston (Barton 1958), Baginton (Booth 1996) and Greensforge (Jones forthcoming b). The topography of the Metchley site could suggest favoured locations for settlement within the plateau to the southwest of the forts, or on the higher ground to the north of the forts, adjoining the group of springs - neither area presently investigated.

#### **6.7.7: PHASE 4: POST-ROMAN**

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

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 Bourne 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. Metchley Park may have been carved out of woodland or waste land between these villages. 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 *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 such 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 annexe may have been re-cut (Jones in preparation) 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 (St. Joseph and Shotton 1937), associated with the Hunting Lodge, 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 assessment provides a summary of the relevant government and local authority policies concerning archaeology, to place this assessment within its planning context.

*Planning Policy Guidance: 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 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.’

Policy 8.36 of the *Birmingham (Unitary Development Plan) 1993* sets down the Council’s policies towards archaeology.

‘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.'

## **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: Map 2). 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 are only of regional or local significance. Both PPG 16, and Monument Protection Programme acknowledge that not all nationally important sites are scheduled, both that 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' interior, 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 overall proportion of sites which are scheduled, but this programme has yet to consider Metchley.**

## 8.0: ARCHAEOLOGY AND PREDICTED ARCHAEOLOGICAL SURVIVAL (Zones 1-6)

### 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. The evidence in each of the six zones within the study area (Map 3) is discussed in turn. The present land use is summarised and a predictive model of archaeological survival is provided (see Appendix 4 for a definition of the criteria employed). The current land-use units and the potential level of archaeological survival are mapped in detail (Maps 4-11). The significance and archaeological potential of the finds and environmental data from the site are considered separately below (Section 9.0). The overall potential survival of each fort, and its potential academic significance is considered separately in Section 10.0 (Maps 12-13).

For convenience the study area has been defined to include an area 50m outside the outermost limit of the forts and associated annexes (Map 3). 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, since other important associated features, including the Roman military road lines, extend beyond this area.

Areas within the study area which have been excavated in detail, or where excavation is proposed for later 1999, have been excluded from detailed assessment in this section of the report.

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, followed by post-excavation analysis and publication of the results, in advance of development (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).



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

### 8.2.1: Present land use (Map 4)

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.

It is intended that the extreme southwestern corner of this zone (1.1: Map 4, Plate 9) be excluded from future development. The remainder of the zone is proposed for development.

### 8.2.2: Archaeological history (Map 2)

One trench was cut across the eastern defences of the Phase 1-2 fort in 1934-6, but unfortunately this ditch profile was neither described in detail or illustrated. An archaeological assessment of this zone was prepared in 1995 (Jones 1995b). Subsequently, the zone was evaluated by fieldwalking, geophysical survey and trial-trenching (Jones 1998b). The evaluation was followed by an area excavation in late 1998 (Area 7, Jones 1999a). Further area excavation, proposed for May/June 1999, will examine areas to the southwest and northwest of Area 7.

### 8.2.3: Archaeological potential (Map 4)

#### Phase 1-2 fort 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. An unusually large quantity of pottery was found during trial-trenching of the outermost ditch in this area. It is possible that this material represents dumping adjoining the *porta principalis sinistra*.

This zone also contains a length of approximately 85m of the defences of the Phase 2A-B 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. Although no evidence of any associated internal buildings were found at excavation, it is possible that associated features, such as ovens and hearths could be located elsewhere within this zone. Two ditches located by excavation outside the annexe could have formed contemporary, or later, outer defences to the annexe.

#### Phase 1-2B fort 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, might be anticipated, as well as latrines. 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. However, relatively little of the

*intervallum* space of the Phase 1-2 forts has been investigated to date, and its archaeological potential is relatively unknown.

#### Phase 3 fort defences

The Phase 3 fort lies wholly outside this zone. However, it is probable that the defences of the eastern side of this latest fort were reinforced by re-cuts of the outermost eastern ditch of the Phase 1-2 fort, and of the Phase 2A eastern annexe ditch.

#### 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).

#### 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.

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

The archaeological remains in this zone are exceptionally well preserved, as has been demonstrated by evaluation and excavation. No part of this zone has been built-upon. The importation of topsoil has limited any plough disturbance to the underlying archaeology. Similarly, the dumping of dredged material alongside the northwestern boundary of the zone will have sealed and protected archaeological deposits from plough disturbance. Preservation of the eastern annexe rampart, which survived to a height of 0.3m was especially notable.

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 (Plate 9). 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 archaeological potential of the area proposed for preservation (1.1) 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.

### 8.3: ZONE 2, West Car Park and adjoining areas (Maps 2 and 5)

This zone is located to the southeast of the canal, and to the south of University Road West (Zone 6, see below).

Areas within the zone which have been archaeologically excavated (Areas 2 and 6), and those areas proposed for further archaeological excavation in 1999 (West Car Park, and adjoining areas) are excluded from detailed consideration in this part of the report.

#### 8.3.1: Present land use (Map 5)

The northwestern part of this zone comprises the West Car Park (Plate 10) and lawned areas to the west. To the east of the lawns are the Biology West (2.1) and adjoining Engineering/Minerals Engineering Buildings (2.2), terraced into the natural slope. Further to the east lies an access road (2.3), with an underpass, flanked on its eastern side by a further range of buildings (2.4) on the eastern edge of the zone. To the south of the West Car Park are further brick-built buildings (2.5-2.6, 2.8, 2.12), together with lawned areas (2.11). An area of deep modern landfill (2.7) is located on the eastern bank of the canal, with a car park (2.10) to the south. Further areas of hardstanding, with brick-built structures (2.9, 2.14-2.15) lie to the south and east of this car park, with a further grassed area (2.13) located towards the southern boundary of the zone.

#### 8.3.2: Archaeological history (Map 2)

The southeastern corner of the Phase 1-2 and Phase 3 forts was trenched during 1934-6. An archaeological assessment of the northwestern part of this zone was undertaken in 1995 (Jones 1995a), and the defences of the Phase 1-2 and Phase 3 forts were evaluated in the following year (Jones 1996). An area excavation was undertaken in 1997 in advance of the construction of the Public Health Building (Jones forthcoming a). A further assessment was prepared in 1998 (Jones 1998a) to consider the implications of the newly-identified eastern annexe (Jones 1999a and in preparation), whose projected alignment crossed this zone, and also to examine the archaeological potential of additional areas, outside the scope of the earlier assessment. The Phase 1-2 defences, and the projected alignment of the eastern annexe defences, and the southern annexe interior were further evaluated in 1999 (Jones 1999b).

#### 8.3.3: Archaeological potential (Map 5)

##### Phase 1-2 fort defences

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 could be a possible 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.

This zone also contains the entire length of the eastern side of the possible 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 located 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 projected southward continuation of the Phase 2A eastern annexe defences also crosses this zone, as may also the suggested outer defences of this annexe located by excavation to the north of University Road West (Area 7). It is possible that this eastern annexe could have joined the southern annexe to form a single L-shaped annexe adjoining the eastern and southern sides of the Phase 1-2 fort, in which case a length of approximately 80m of this annexe would be located within this zone.

#### Phase 1-2 fort interior

Most of the unexcavated part of the Phase 1-2 fort interior within this zone is proposed for area excavation later in 1999, and its archaeological potential will not be considered in detail here. 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. The archaeological potential of the southern annexe interior is unknown. A number of hearths or ovens were cut into the rear of the eastern annexe rampart to the north of this zone (in Area 7, Map 2), but no structures were found in the excavated part of its interior (Jones 1999a).

#### Phase 3 fort, defences and interior

Most of the southeastern corner of the Phase 3 fort, located within this zone, has been excavated (Areas 2 and 6). It is probable that the outermost eastern ditch of the Phase 1-2 fort was re-cut, forming an outer line of defence for this latest fort. There is no evidence for the continuation of this Phase 3 re-cut along the southern side of the earlier defences, possibly because of extensive modern disturbance.

A short length of the eastern side of the Phase 3 defences is proposed for excavation later in 1999.

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). An important feature of this area was the recovery of a quantity of

rusticated ware jar fragments, which suggest some form of activity within the fort interior after the suggested date of its military abandonment around AD 70.

#### Other features

A concentration of flint finds recovered from this area during excavation in 1967 (Area 2) 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 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 set down in Appendix 4.

With the exception of the areas excavated, and those designated for excavation later in 1999, there are no areas of high archaeological potential within the zone. The areas of moderate archaeological potential within the zone comprise two lawns (2.11, 2.13). The first of these areas is crossed by the southern defences of the southern annexe, and the second area lies outside the southern annexe defences. The areas of moderate-low potential comprise hardstandings and the footprints of single-storey buildings (2.2, 2.8, 2.9, 2.10, 2.15). The areas of poor archaeological potential comprise an area of recent infill (2.7), the footprints of two storey buildings (2.1, 2.4, 2.5-6, 2.12, 2.14) and a road (2.3). However, it is important to note that the areas of medium-low potential have not been tested by an evaluation, and some islands of better archaeological survival may be located here.

#### **8.4: ZONE 3, Mental Health Trust property (Maps 2 and 6)**

This zone is defined by Vincent Drive, University Road West, and the railway line, on its northwestern, northeastern and southeastern sides respectively. The southwestern boundary of this zone is defined by a steep slope, facing in the same direction, created by modern dumping.

##### 8.4.1: Present land use (Map 6)

This largely built-up zone is currently in the ownership of the South Birmingham Mental Health Trust. It is included in this report to permit a comprehensive assessment of the overall significance and survival of each fort or annexe within the Roman military complex.

Four major buildings (3.1-3.4), linked by tarmac roads, and adjoining surfaced car parks are located within the zone. A timber-framed, two storey office building (3.5: Plate 11), with a partly raised floor adjoins University Road West. To the rear of the building is a surfaced car park (3.6). To the west of buildings 3.1-2 and 3.4 is a road (3.7) mostly surfaced at, or slightly below, the level of the adjoining road and roundabout (Zone 6). The ground level falls away to the southwest adjoining building 3.2, and this break of slope is also reflected in this road surface. To the west of road 3.7 is a lawned area (3.8) slightly raised above the level of Vincent Drive to the northwest. To the south are four inter-connected ranges of temporary, single-storey, buildings (3.9: Plate 12), with adjoining portakabins. This range of buildings is sited on a raised plateau, which lies between 0.5m and 2m above the surrounding ground-level on its northern and southern sides respectively. To the south of these buildings is a steep, southwest-facing slope (3.10), created by dumping along the plateau to the north. Further to the southwest is a heavily overgrown area (3.11: Plate 13), where a considerable depth of modern dumping is also suspected. The extreme southeastern part (3.12) of this zone is inaccessible, and could not be inspected.

#### 8.4.2: Archaeological history (Map 2)

This zone has probably been the least archaeologically investigated within the fort complex overall. The western defences of the Phase 1-2 and Phase 3 forts were trenched by St. Joseph and Shotton during 1934-6 in the vicinity of the *porta principalis dextra*, but this gate was not itself examined. No archaeological fieldwork has been undertaken since this date within this zone. This zone was included in an archaeological assessment prepared in 1997 (Jones 1997), which also considered the archaeological potential of other land both within and adjoining the fort complex.

#### 8.4.3: Archaeological potential (Map 6)

##### Prehistoric

A north-south aligned stream course (Figs. 6-8) lies just to the west of this zone. Excavation adjoining this stream course in 1988-9, north of Vincent Drive (i.e. to the north of this zone) identified a group of burnt mounds of probable Bronze Age date. These features comprise mounds of heat-shattered pebbles, set in a matrix of charcoal-rich soil, and are usually dated to the Bronze Age. It is possible that further burnt mounds, located adjoining this stream-course, could lie within or just outside this zone, especially since clustering is a typical attribute of these sites. Associated waterlogged deposits could contain important plant and insect remains which may provide valuable data concerning the prehistoric environment (see Section 9.0).

##### Phase 1-2 fort 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 possible that a corner-tower was located at the southwestern corner of the 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 2), including a palisade and the heightening of the berm between the two ditches with clay. A further obstacle to attackers on the western side of the fort may have been provided by a possible *titulum*, located by excavation to the north of Vincent Drive, which probably also extended to the south of this road, adjoining the *porta principalis dextra*. A gravelled road associated with the Phase 1-2 or Phase 3 fort was traced for a distance of 10m to the west of the entrance by St. Joseph and Shotton (1937).

This zone also includes the full length of the western side of the possible southern annexe and its southwestern corner, a possible corner-tower location by analogy with the evidence from the possibly contemporary northern annexe (Plates 1-2).

Although there is presently no evidence of a Phase 2A western annexe adjoining this side of the Phase 1-2 fort, the possibility of such an annexe should not be discounted. The existence of an annexe along this side of the fort might be hinted-at by the alignment of the stream adjoining this side of the fort which appears to run parallel to the fort from a point opposite the northern side of the northern annexe to a point opposite the southwestern corner of the Phase 1-2 fort. This length of the stream could provide evidence of its diversion, possibly in advance of the creation of such a western annexe.

#### Phase 1-2 fort 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 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 southern end. Granaries were often constructed in pairs adjoining entrances, and a further granary constructed adjoining the excavated building may have been partly located within this zone. 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 fort at Metchley could also 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, and was probably located at Metchley 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 to contain the regimental shrine and the treasury. The *principia* at the Claudian forts of Valkenburg in Holland (Glasbergen 1972) and Hod Hill (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 at 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 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, possible stabling, in some excavated examples, including rooms for the general use of the garrison, for storage or washing.

Excavation in the left *retentura* 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, Map 2). 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 at that time. 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. 13), 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 also be found within the annexe 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. It is possible that the southern and western defences of this fort could have been reinforced with further, outer defences, such as those identified by excavation adjoining the northern and eastern sides of the fort, which have been more extensively investigated. 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, but no possible corner tower locations have been investigated to date.

This zone 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. 10) 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.

It is possible that further evidence for late activity post-dating the military abandonment of the site around AD 70, most notably represented by the group of rusticated jars excavated in 1997 (Area 6, Zone 2), could be found in this zone.

#### Extra-mural settlement

The western part of this zone, adjoining the fort defences could have been a favoured location for an associated civilian settlement. Three reasons for this hypothesis may be suggested. Firstly, this area was located on a raised natural plateau. Secondly, it adjoined the *porta principalis dextra*, and would have been bisected by the east-west road leading out of that gate, adjoining which traces of a civilian settlement might be anticipated. Thirdly, the recovery of a group of copper alloy objects of probable civilian association from excavation elsewhere along the Phase 1-2 fort's western side could indicate that a civilian settlement was located along this side of the fort.

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 6)

Since this area is outside the ownership of the University of Birmingham, no service information was readily available. Therefore, the assessment of potential below-ground archaeological survival presented in this section of the report does not consider the likely impact of service trenches and ducts upon the archaeology. The absence of this service information may introduce a small bias into the overall assessment of feature survival, although this is not likely to be significant.

The potential for the survival of archaeological remains in this zone of the fort is varied. The areas of high potential for archaeological survival comprise the footprint of a temporary timber building (3.5) with a partly raised floor adjoining University Road West, a lawn adjoining Vincent Drive (3.8), the raised terrace containing temporary buildings and portacabins (3.9), and the adjoining area of modern dumping to the west (3.10-11). Because of the considerable depth of the modern build-up in area 3.9 and the anticipated shallow depth of the footings of the overlying temporary buildings, an exceptionally high degree of archaeological survival may reasonably be anticipated here. Similarly, recent activity in areas 3.10-11 appears to have been limited to dumping, which will have protected buried archaeological deposits from tree root or other disturbance.

A moderate level of archaeological survival may be anticipated beneath a car park (3.6), and in the grassed areas between building 3.5 and the railway cutting. A moderate-low level of potential survival may be predicted along part of the line of road 3.7. Predicted archaeological survival in the area in the southeast of this zone (3.12) outside the area of public access may be suggested to be moderate-low. Potential archaeological survival along that part of road 3.7 which is constructed along the line of the Elan Aqueduct is anticipated to be poor. Archaeological survival in the remaining areas within this zone, comprising the footprints of the major buildings (3.1-3.4), and the area of the adjoining subway, is also anticipated to be poor.

#### 8.5: ZONE 4, University of Birmingham Medical School (Maps 2 and 7)

This zone is located to the north of Vincent Drive.

##### 8.5.1: Present land use (Map 7)

This zone mainly comprises lawned areas adjoining Vincent Drive, with the Medical School buildings to the rear. For convenience, the zone is described from west to east. The extreme western part of the zone comprises an overgrown, west-facing embankment (partly within the Psychiatric Hospital grounds, 4.1, Plate 14), also marking the position of a former field boundary. To the east lies the northwestern, reconstructed corner of the Phase 2A northern annexe (4.2, Plate 15), with further lawned areas (4.3, Plate 16) to the south and east, adjoining the northwestern side of Vincent Drive. Further to the east are two adjoining car parks (4.4), with further lawns (4.5), planted with drifts of trees to the east. The southern edges of lawns 4.3 and 4.5 are raised, forming embankments measuring between 1m and 2m in height (from east

to west), adjoining Vincent Drive. These embankments may have been formed using topsoil removed during the creation of the car parks (4.4).

To the east of the reconstructed corner of the northern annexe lie two modern extensions to the Medical School (4.6, 4.7). To the east lies the irregularly-shaped main Medical School building (4.8), mostly constructed in the 1930s. A modern building (4.9) adjoins the reconstructed northwestern annexe defences. To the north of the main Medical School building lies a largely built-up area (4.10) including car parks, mostly terraced at a level of up to 2m below the surrounding ground-level, extending along the whole of the northern part of this zone, which is not described in detail. To the east of lawn 4.5 is a surfaced car park (4.11), with an adjoining area of temporary car parking (4.12, Plate 17). Further to the east are further undulating lawned areas (4.13) located in the area between Vincent Drive to the south, the main Medical School building to the north, and a new medical research building to the east.

#### 8.5.2: Archaeological history (Map 2)

This zone probably comprises the most intensively investigated part of the fort complex. The eastern and western sides of the Phase 1-2 fort, the defences of the Phase 2A northern annexe, and the Phase 3 fort were investigated by means of narrow trenches dug during 1934-6 (St. Joseph and Shotton 1937). A length of the western defences of the northern annexe was cleared by K. Dauncey in 1949, and in the following year Graham Webster excavated the northwestern corner of the annexe, and the *porta decumana* of the Phase 3 fort. Excavations in 1963 (Area 1A) tested the western defences of the Phase 1-2 and Phase 3 forts. In the following year area excavations (Area 1B) examined part of the northern annexe interior. Large-scale investigations in 1968-9 (Areas 3-4) examined part of the left *retentura*, and the *porta decumana* was further excavated in 1969 (Area 4D). The western and northern defences of the Phase 1-2 and Phase 3 forts were also examined during 1968-9, but the investigations were mainly confined to narrow machine-cut trenches which were mostly located in the northwestern corner of the forts. The northeastern corner of the forts has not been investigated since 1936, and no area within this zone has been archaeologically evaluated, excavated or assessed since 1969.

#### 8.5.3: Archaeological potential (Map 7)

##### Phase 1-2 fort defences

This zone contains 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, a counterscarp bank located by excavation which may have formed part of a *titulum* 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 may have been 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 ditches along the northern side of the fort may have been re-cut in Phase 3.

The zone also contains the full extent 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 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 contain barrack-blocks and workshops.

The excavated part of the left *retentura* contained two facing barrack-blocks, 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 a self-contained *fabrica*. The central range comprised the men's quarters, providing accommodation for two cavalry *turma*, 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, Fig. 10), and a further, adjoining granary of similar construction may be anticipated. It is possible that the extreme southern edge of this zone could contain the northern part of the *principia*, which was usually centrally placed within the fort.

This zone also contains the whole of the interior of the Phase 2A northern annexe. Although approximately 10% of its interior has been examined (Area 1B), 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. Although there is at present no evidence for an annexe along the western side of the fort as stated above the possibility of its existence should not be discounted.

Based on the excavated evidence from this area of the fort (Areas 3-4, Map 2) 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.

#### 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 strengthened by the re-excavation of one, or possibly both of the northern 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, 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 a further granaries, a *principia* and *praetorium* may be anticipated here if the fort adhered to the usual military layout.

#### Extra-mural features

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, perhaps comprising ditched plots laid-out alongside the line of this road, containing timber-framed sheds and buildings, located just outside the western fort defences.

#### Post-medieval

A north-south aligned gravelled trackway of probable post-medieval date, possibly associated with the Hunting Lodge, was identified by evaluation in 1988-9 (Jones 1988, 1989) just to the west of this zone.

#### 8.5.4: Predicted archaeological survival (Map 7)

A high level of archaeological survival may be anticipated in the lawned areas (4.3 and 4.5) to the south and west of the main Medical School building. Very good preservation of archaeological features and deposits may be predicted within the embanked areas along the southern edges of these lawns, in the area of the northern part of the central range of the Phase 1-2 and the Phase 3 forts. Similarly, archaeological preservation along the western side of the zone (4.1; excluding the built-up areas), adjoining the western fort defences, which may have been protected by recently dumped deposits, is predicted to be high. An area of temporary car parking (4.12) in front of the main Medical School building may also be an area of high archaeological potential, as well as part of the lawned area (4.13) adjoining the southeastern corner of the main Medical School building.

Because many of the archaeological features within the excavated part (Areas 3-4) of the lawned area (4.3) have been dug away during archaeological excavation in 1968-9, archaeological survival in this area may be assessed as moderate. Some features, such as the pebbled floor surfaces were not themselves excavated, and the potential of any underlying deposits, belonging for example to a construction camp, remains to be tested. Similarly, in the area of the reconstructed northwestern defences of the northern annexe (4.2), archaeological survival may be assessed as moderate, because the defences were cleared by machine in 1949 and little of the original feature fills and their original profiles may have survived. However, the public visibility of this part of

the site suggests a higher level of importance overall, linked with the potential of this part of the fort for the public presentation of the site, which will be enhanced by the positioning of a new interpretation panel here. The car parks (4.4, 4.11) in front of the main Medical School building are also graded as areas of potentially moderate archaeological survival, although no information is presently available about the depth of the associated make-up deposits.

Archaeological survival over the remainder of the zone, comprising the main Medical School building (4.8), the largely built-up area to the side and rear (4.9, 4.10), the more recent Medical School buildings (4.6-7), the route of the Elan Acqueduct, service trenches and a subway (all part of 4.13), may be graded as poor.

### **8.6: ZONE 5, Land to the south of Vincent Drive (Maps 2 and 7)**

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

#### **8.6.1: Present land use (Map 7)**

The northwestern fringe of the zone (5.1), adjoining University Road West comprises a grassed area planted with mature and semi-mature trees. To the east are two tennis courts (5.2), surfaced with tarmac. The tennis courts occupy a mostly raised terrace, its northeastern edge approximately 1.2m above the surrounding ground level, although its opposing, southwestern edge is formed slightly below the level of the adjoining lawned area (5.1). To the southeast of the tennis courts is a grassed embankment (5.3). Further to the northeast are two surfaced car parks (5.4-5.5). Car park 5.5 partly overlies the site of a recently demolished greenhouse. This car park was recently constructed overlying dumped ash and other deposits to ensure any underlying archaeological features were not disturbed (Jones 1999c). Further car parking (5.7) is provided to the southeast. The area between the new car park (5.5) and Vincent Drive is mostly occupied by a brick building (5.6) which remains in use. The area to the rear of the car parks, to the northeast of the railway embankment, is an irregular and overgrown southeast-facing slope (5.8).

#### **8.6.2: Archaeological history (Map 2)**

Three trenches were cut in this zone between 1934-7 (St. Joseph and Shotton), one to examine the eastern defences of the Phase 1-2 fort and two to sample the eastern defences of the Phase 3 fort. An archaeological watching brief was maintained in 1999 (Jones 1999c) to monitor the construction of a new car park (5.5).

#### **8.6.3: Archaeological potential**

##### **Phase 1-2 fort 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, Jones 1999a) to the south of this zone may have continued northward into Zone 5.

#### Phase 1-2B fort interior

A length of the eastern *intervallum* space 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. 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 belonging to 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 to the rear of the rampart, by analogy with the evidence provided by excavation to the south (Area 6, Fig. 13).

#### 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. It is possible that the outermost Phase 1-2 fort ditch may have been re-cut to provide an additional line of defence along this side of the fort. 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 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.



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 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*.

#### Extra-mural settlement

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 extra-mural settlement adjoining the northern side of the road leading out of this gate could have extended northwards into this zone.

#### 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 7)

The potential for the survival of archaeological remains in this zone is generally high. The lawned area (5.1) adjoining University Road West has not been built-over, and potential preservation here may be assessed as high, although some below-ground disturbance may have been caused by tree roots. Archaeological preservation below the adjoining terraced tennis courts (5.2) and the adjacent embankment (5.3) is also anticipated to be high, because of the nature of the current land-use, and the mostly raised terrace may have prevented any below-ground disturbance. Preservation is also anticipated to be high beneath the adjoining former tennis court (5.4) and in the car park (5.5, 5.7) areas, which have not been disturbed by buildings, with the exception of a greenhouse (part 5.5) which had shallow foundations.

Preservation in the embanked area (5.8) adjoining the railway and adjoining the existing building (5.6) adjoining Vincent Drive is anticipated to be moderate. Preservation in the area of the building (5.6) is anticipated to be poor.

### **8.7: ZONE 6, Vincent Drive, roundabout and University Road West (Maps 2 and 7)**

This zone comprises parts of Vincent Drive (6.1, 6.2) adjoining a roundabout and the northwestern end of University Road West (6.3, 6.4). This zone is included in the assessment for completeness.

This zone includes lengths of the eastern and western defences of the Phase 1-2 forts, part of the eastern Phase 2A/B annexe and the eastern and western sides of the Phase 3 fort. Vincent Drive and the associated roundabout crosses the *retentura*, and part of the central range of the forts. The northwestern end of University Road West crosses part of the right central range and the right *praetentura*.

Preservation of archaeological features and deposits in this zone is anticipated to be poor (6.1, 6.2), with the exception of University Road West and the surrounding embankment (6.3), which lies at approximately 2m above the level of the surrounding ground level, which will have facilitated the preservation of archaeological features and deposits, although some degree of below-ground disturbance may have been caused by service trenches cut alongside the road. Preservation of features and deposits in the area of this embankment is anticipated to be high (6.3), but in the remainder of this road preservation is assessed as poor (6.4).

### **8.8: Other areas (Map 2)**

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 fort at Metchley have produced in excess of six thousand sherds of Roman pottery. The largest quantified assemblage came from Areas 1-5, 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 have 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 are 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.

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 first or early second 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 appears to be locally made. There were indications from the mortaria that this 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 were 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).

Current approaches to the study of Roman pottery emphasise the importance of publishing fully quantified data (Willis ed. 1997, 11), and the benefits of this can be seen in the synthetic studies that have been published over the past decade (for example Booth 1991, Jeremy Evans 1993). Unfortunately, the Rowley assemblage was only partially, and inconsistently, quantified. None of the pottery was recorded by rim EVE (estimated vessel equivalent), so it is not possible to study the functional composition of the assemblage based on vessel forms. The samian, amphorae,

mortaria and stratified coarse wares were recorded by count and weight, but the unstratified coarsewares were only quantified by weight. As noted above, the material excavated by St Joseph and Shotton was not quantified by count, weight or rim EVE. The small West Car Park site assemblage, therefore, is the first assemblage from Metchley to be quantified to modern standards. Together with the Genetics Field assemblage currently awaiting analysis, and any assemblages recovered as a result of further field work, it will provide essential and significant data which will be of value to any future regional studies. As more data is accumulated it will be increasingly possible to characterise the assemblage by period, and perhaps address some outstanding questions. What, for example, is the nature of the Flavian-Trajanic activity on the site - military or civilian? Are any functional trends evident in the assemblage? And finally, if pottery was produced at Metchley, how does this relate to other pottery production sites in the region, for example the kilns at Sherifoot Lane, Sutton Coldfield, and Tiddington and Lapworth in Warwickshire?

## **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.

## **10.0: SURVIVAL AND SIGNIFICANCE BY PHASE (Maps 1-2, 8-9)**

This section of the report is arranged to provide an assessment of the survival of deposits associated with each of the main phases of activity represented at Metchley. Survival is based upon the criteria defined in Appendix 4. Assessment of archaeological significance is based partly upon the non-statutory criteria for the assessment of national importance, and also upon the perceived high academic

potential of certain areas of predicted high and moderate survival within the study area, as is described below.

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 2 and 8)**

Evidence of burnt mounds of prehistoric date may be anticipated adjoining the western edges of Zones 3 and 4, and also immediately outside the western boundary of the study area. Other evidence of prehistoric activity may be provided by scatters of flint artifacts found within Roman contexts and in the topsoil but the location, and also the extent and significance, of this group of artifacts is difficult to assess. A particular concentration of worked flint fragments was located during excavation in the southeastern corner of the Phase 1-2 fort (Area 2, Zone 2).

The importance of the possible burnt mounds is assessed using the non-statutory criteria for the assessment of national importance (Appendix 4), as follows:

Survival/condition. The areas where burnt mounds are most likely to be located are areas of potentially high archaeological survival.

Period. Burnt mounds are the principal site type of prehistoric date in Birmingham and also in parts of the surrounding areas.

Rarity. Evidence of prehistoric activity in the Birmingham area is largely confined to burnt mounds and chance finds of metalwork.

Fragility/vulnerability. Burnt mounds may survive as above-ground, as well as below-ground, features. Any above-ground features would be especially vulnerable to damage. Damage to below-ground deposits would include the dessication of waterlogged soils.

Diversity. Although burnt mounds mainly comprise a mound of heat shattered pebbles set in a matrix of charcoal-rich soil, associated features such as hearth-pits may also survive. Additionally, burnt mounds may be associated with organic waterlogged deposits which could provide important information concerning the contemporary environment.

Documentation. The archives of the 1988/9 excavations are held at BUFAU.

Group value. A typical attribute of burnt mounds is their clustering. Excavation along the stream to the west of the forts identified a number of burnt mounds, although these were undated, and may not be contemporary.

Potential. Burnt mounds are arguably the most important source of information for the prehistoric period in the Birmingham area. It is possible that prehistoric features could have survived beneath the fort ramparts, and also beneath pebbled surfaces, which could have protected the earlier features and deposits from later disturbances.

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 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 8-9)**

The particular significance of the site 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 *alae* 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 XIV legion, and 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).

Excavations at Metchley have also provided tantalising evidence of an associated civilian settlement, albeit on a probably small-scale. The placement of the forts at, or near to, a major crossroads, leading to Alcester, Droitwich and Wall (near modern Lichfield), and the suggested evidence for occupation at the site post-dating the military abandonment (around AD 70), could hint-at a possible later official function for the Metchley, possibly associated with the Roman imperial postal system, the *cursus publicus* (Black 1995). Associated with the *cursus publicus* were *mansiones* (official guest-houses, e.g. Wall, Round 1992), and intermediate locations used for a change of horses (*mutationes*). It is not impossible that this latest Roman presence at Metchley was associated with the *cursus publicus*, and any further evidence associating the later occupation of the site with such an official function would be of considerable academic importance.

### 10.3: Phase 1-2 forts (Maps 2, 8)

#### 10.3.1: Potential preservation of defences

Parts of the eastern (Zones 1-2) and southern (Zone 2) Phase 1-2 fort defences are proposed for further excavation later in 1999. A further length of the eastern defences (Zone 1, 1.1) has been excluded from the adjoining development. The remainder of the eastern side is located within areas of high potential for survival (Zone 5, 5.3, 5.4; Zone 6, 6.3). With the exception of the length of the southern defences proposed for excavation later in 1999, the remainder of this side either comprises areas of moderate-low potential (Zone 3, 3.12), low potential (Zone 2, 2.7), or has been dug away by the canal and railway cutting. The western side of the fort may be the best preserved overall, being mostly located in areas of high potential (Zone 3, 3.9, 3.10; Zone 4, 4.3) although a small part of this side was disturbed by the Elan aqueduct (Zone 3, part of 3.7). The northern defences are also relatively well preserved, being located in areas of predicted high (Zone 4, 4.3, 4.5, 4.12, 4.13) or moderate survival (Zone 4, 4.4, 4.11). A short length of the northern defences was cut by the Elan aqueduct and by a subway (Zone 4, part 4.13), where survival is predicted to be poor. The *porta principalis sinistra* has been dug away by the canal and railway cutting. The *porta principalis* is partly located in an area of low survival (Zone 2, 2.7). The *porta principalis dextra* is located in area of high potential survival (Zone 3, 3.9, 3.10), and the *porta decumana* is sited in area of moderate archaeological survival (Zone 4, 4.4).

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. The most substantial areas of predicted high potential for archaeological survival are located in the left *retentura* and in the adjoining *intervallum* space (Zone 4, part 4.3, 4.5). Small islands with high potential for archaeological survival are located in the right *retentura* (Zone 4, 4.12, part 4.13), but the largest areas of predicted high archaeological survival in the right *retentura* and the adjoining eastern *intervallum* space are located in Zone 5 (5.1, 5.2). Other areas in the *retentura* have a moderate potential for archaeological survival (Zone 4, 4.3: part archaeologically excavated, 4.4, 4.11), or a predicted low level of archaeological survival (Zone 4, part of 4.12, part 4.13).

The potential survival of archaeology in the central range is also varied. Archaeological survival within the left side of this part of the fort interior is anticipated to be high (Zone 3, 3.8, 3.9, 3.10; Zone 4, part 4.3), and a similar, or possibly even better, level of survival may be anticipated on the right side of the central range (Zone 5, 5.1, 5.2; Zone 3, 3.5). The remaining areas within the central range are considered to be either of moderate-low survival (Zone 3, 3.6, part 3.7), or poor survival (Zone 3, 3.1, part 3.7; Zone 6, 6.4).

The *praetentura* is the least well preserved area of the Phase 1-2 fort interior. The areas with a high predicted level of archaeological survival lie in Zone 3 (3.9, 3.10) within this part of the fort. The areas of potential moderate-low survival mostly comprise hardstandings (Zone 3, 3.12). The remainder of the *praetentura* is either predicted as an area of low archaeological survival (Zone 2, 2.7; Zone 3, 3.1, 3.2, 3.3, 3.4, the surrounding area and line of the Elan aqueduct), or has been dug away by the canal and railway cutting.

### 10.3.3: Areas of key research potential (indicated on Map 8 by areas of closer shading)

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).
- The unexcavated junctions between the Phase 1-2 defences and the annexes, which could further elucidate the defensive sequence (e.g. Zone 2, 2.1, to be excavated later in 1999). In this context it should be remembered that it is not impossible that an annexe of similar width to the eastern annexe could be located adjoining the western side of the forts.

#### 2) Fort interior

- Areas where sufficiently large areas 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: Significance

The importance of the Phase 1-2 fort defences and Phase 1 internal buildings is assessed according to the non-statutory criteria for the determination of national importance as follows:

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 moderate survival. Archaeological survival in the *praetentura* is generally more limited. A notable feature of parts of the fort interior (e.g. Area 2, Zone 2) is the evidence for stratified deposits; other areas of equally good survival may be located (e.g. possibly in Zone 5).

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.

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.

Fragility/vulnerability. The structural remains of this phase comprise beam-slots for timber-framed buildings, and beaten-earth and pebbled floor surfaces, and as such are potentially highly vulnerable to shallow disturbances.

Diversity. A number of different timber-framed building types, including two distinct types of barrack-blocks, granaries, store-buildings and workshops have been uncovered. Evidence of other features possibly associated with ironworking have also been uncovered. Overall, the Phase 1 fort has yielded the most diverse group of buildings, or building types. Additionally, excavation has identified defensive ditches, ramparts, and other, outer defences.

Documentation. The archaeological evidence from this fort is supported by the excavation, finds and research archives from the 1967-9 and 1997-8 (and continuing) fieldwork at the monument. The archaeological data is also complemented by the cartographic evidence and the detailed antiquarian descriptions.

Group value. The Phase 1 fort is perhaps of particular value as being the first fort in a sequence of four main phases of military activity at the site. The association of a civilian settlement with this phase of military activity would further enhance the importance of the military remains.

Potential. The fort has the potential to contribute to the wider understanding of early military deployment, and fort planning on a national basis.

Amenity value. The Phase 1-2 fort also has a value for the public presentation of the site.

#### **10.4: Phase 2A/B annexes (Maps 2, 8)**

##### 10.4.1: Potential preservation

No part of the northern annexe defences is located in an area of predicted high archaeological survival, with the exception of its extreme southeastern corner (Zone 4, 4.13). The western, reconstructed side of the northern annexe defences is located in an area of predicted moderate survival (Zone 4, 4.2). The eastern and northern defences of this annexe are located in areas of low survival (Zone 4, 4.7, 4.8). The annexe interior is located within areas of predicted high survival (Zone 4, 4.3: partly investigated in 1964, 4.5, 4.12), moderate survival (Zone 4, 4.4, 4.11), and poor survival (Zone 4, 4.6, 4.7, 4.8).

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 the defences and interior of this annexe has been excavated (Area 7, Zone 1), and the presumed southwestern corner of the defences is located within an area proposed for excavation later in 1999 (Zone 2). The northern part of the annexe defences crosses an area of high archaeological potential (Zone 5, 5.7), although the area of the suggested junction with the northeastern corner of the Phase 1-2 fort is located with an area of predicted low archaeological potential (Zone 4, part 4.13, line of Elan aqueduct). The southern end of the annexe defences cross University Road West, an area of high archaeological survival (Zone 6, 6.3). It is possible that the eastern and southern annexes were combined, forming a single L-shaped annexe adjoining the eastern and southern sides of the Phase 1-2 fort, in which case the southern part of the eastern annexe defences would be located within areas of predicted moderate-low survival (Zone 2, 2.2) and low archaeological survival (Zone 2, 2.1), and the southern end of the eastern side of this possible 'combined' annexe would be partly intercepted by the proposed area excavation, later in 1999. Overall the predicted level of survival of the defences and interior of this annexe is good, and is better than that of the northern and southern annexes.

The southern annexe remains to be identified by excavation. Part of the northeastern interior of this possible southern annexe and also the majority of its eastern side are proposed for excavation later in 1999. There are no areas of high potential survival along the line of the annexe defences, or within its interior, with the exception of the areas proposed for excavation in 1999. A short length of the southern defences of this annexe is an area of predicted moderate survival (Zone 2, 2.11). The remainder of the annexe interior and defences are areas of predicted moderate-low (Zone 2, 2.8, 2.9, 2.10, 2.14, 2.15; Zone 3, 3.12), or poor survival (Zone 2, 2.6, 2.7; Zone 3, 3.4). Part of the southern side of the annexe was dug away by the canal and railway cutting.

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

#### 10.4.2: Areas of key research potential (Map 8)

- 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: Significance

The potential of the Phase 2A annexes is assessed below in relation to the non-statutory criteria for the assessment of national importance:

Survival/condition. With the exception of the areas proposed for excavation in 1999, the southern annexe defences and interior are sited in areas of predicted moderate-poor survival. The northern annexe is located in areas of high-poor survival. The unexcavated part of the eastern annexe is located in areas of high potential for archaeological survival.

Period. Annexes are typical military features of the mid-late 1st-century in the midlands, and beyond.

Rarity. Although the existence of annexes at other forts (e.g. Greensforge) has been confirmed by aerial photography, the three potentially contemporary annexes at Metchley, and their suggested association with structural (and possibly functional) changes within the Phase 1 fort interior, are perhaps without clear excavated parallels from the midlands.

Fragility/vulnerability. 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 hearths could also be affected by comparatively shallow modern disturbances.

Diversity. The annexes are presently represented by ramparts, ditches, and most notably by the group of ovens and hearths located to the rear of the eastern rampart. The different width of the eastern as opposed to the northern and possible southern annexes could suggest a difference in function.

Documentation. The eastern annexe excavation (Area 7, 1998) is associated with a detailed excavation and finds archive, and a post-excavation research archive.

Group value. The recently excavated eastern annexe was probably contemporary with the northern, and the possible southern, annexe, and may

also have been contemporary with an associated civilian settlement. It is not impossible that a further annexe was located adjoining the western side of the forts, in an area which remains to be investigated. The annexes may also have been contemporary with a number of structural changes in the Phase 1 fort interior. The Phase 2A annexes may have been associated with a possible function of the site as a store depot, a function which may have continued in Phase 2B, and may have a particular significance as defining the first stage in the adaptation of the site for this use. The eastern annexe may be associated with later re-use of this defensive line in Phase 3 and also in the post-medieval period.

Potential. 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. By analogy with the evidence from other excavated annexes, it is possible that any civilian occupation of the site post-dating its military abandonment could have been wholly or partly located within one or more of the annexes. Furthermore further outer defensive features could be identified by fieldwork. Given the surrounding land-use, it is unlikely that such features could be identified by aerial photography.

Amenity value. The northwestern corner of the Phase 2A northern annexe has been reconstructed, and the reconstructed defences will shortly be complemented by an interpretation panel in this location. 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, 8)**

### 10.5.1: Potential preservation

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 almost certainly not internally arranged 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. Areas 3-4, Fig. 10), and also beneath modern dumping. Because of the predicted high level of survival of parts of the Phase 3 eastern defences (Zone 1, 1.1, Zone 5, 5.1, 5.2), the preservation of Phase 2B internal features is predicted to be particularly high in this sector of the fort interior.

### 10.5.2: Areas 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 moderate 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: Significance

The evidence for the layout of the Phase 2B fort is assessed against the criteria for the determination of national importance below:

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.

Period. Such irregularly-constructed temporary buildings are only occasionally found in a military context (e.g. Derby, Wilderspool) from the 1st-century.

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.

Fragility/vulnerability. 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.

Diversity. 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.

Group value. The Phase 2B has particular value in being associated with both earlier and later military occupation of the site, and also, possibly with a contemporary civilian settlement. Given the suggested evidence for the remodelling of the Phase 1 internal structures (possibly in Phase 2A), which may have created further enclosed storage space, as well as open storage in the area of the annexes, the Phase 2B fort may have an added significance as forming a distinct second phase in the use of the site as a military stores base.

Potential. 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 contribute towards a better appreciation of the supply function of the site.

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, 9)

### 10.6.1: Potential preservation

The potential for the preservation of the Phase 3 fort defences is overall quite good. Part of the eastern fort defences are proposed for excavation later in 1999 (Zone 2). The predicted level of survival of part of the remainder of this side is high (Zone 5, 5.1, 5.2). An exception is the extreme northern end of this side, affected by the Elan aqueduct (Zone 4, part 4.13), where preservation is anticipated to be poor, and a similar level of preservation is predicted in Zone 6 (6.1, 6.4). Part of the southern defences are located in an area of poor preservation (Zone 3, 3.2), and the immediately surrounding area (Zone 3, 3.12) may have a moderate-low potential for preservation, although this area was not available for inspection. Much of the remainder of the southern side was dug away by the canal and railway cutting. Potential preservation along the western defences is mainly high (Zone 3, 3.9; Zone 4, part 4.3), although areas of moderate (Zone 4, part of 4.3 excavated 1968-9) and poor survival (Zone 3, part 3.7, Elan aqueduct; Zone 6, 6.2) are also recorded. The predicted level of preservation along the northern defences is mostly moderate (Zone 4, part 4.3 excavated in 1968-9, 4.4), although small areas of potentially high preservation (Zone 4, 4.5, 4.12, part 4.13) are recorded towards the eastern end of this side. The extreme eastern end of this side is an area of poor potential preservation (Zone 4, part 4.13). The partly excavated *porta decumana* is mostly located in an area of moderate potential for preservation (Zone 4, 4.4). The *porta principalis sinistra* is located in an area of high potential for preservation (Zone 3, 3.9). 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 (Zone 4, 4. part 4.3, 4. 5, 4.12, 4.13; Zone 5, 5.1), although none of these areas are substantial in size. Two larger, contiguous areas within the *retentura* (Zone 4, part 4.3 and 4.4), the first comprising the extensive 1968-9 area excavations, both have a moderate potential for archaeological survival. Further potential almost certainly exists here for the further excavation of archaeological features and deposits not originally fully

excavated. The part of the right *retentura* underlying the modern roads may be an area of poor survival (Zone 6, 6.1, 6.2, 6.4).

The left side of the central range is partly located in areas of high archaeological potential (Zone 3, 3.8, 3.9; Zone 4, 4.3). Both areas are substantial in size, and archaeological preservation in both is anticipated to be especially high because of overlying, recent build-up deposits. Two small areas adjoining the eastern *intervallum* within the right side of the central range are areas of high potential (Zone 3, 3.5; Zone 5, 5.1). The remaining areas within the central range are assessed as being either of moderate (Zone 3, 3.6, part 3.7; Zone 4, 4.3 area excavated 1968-9) or poor survival (Zone 3, 3.1, part 3.7, Elan aqueduct; Zone 6, 6.1, 6.4).

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. Some of the surviving extent of the *praetentura* is located within areas of predicted low-moderate (Zone 3, part 3.7, 3.12), or poor (Zone 3, 3.1, 3.2, part 3.7) archaeological survival. Most of the right *praetentura* was dug away by the canal and railway cutting, although part (Area 2) has been excavated.

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: Significance

The potential of the Phase 3 fort is assessed below in relation to the non-statutory criteria for the assessment of national importance:

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 moderate 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.

Period. Roman military occupation in the midlands and elsewhere is characterised by forts of similar size and construction.

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.

Fragility/vulnerability. 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 traces of the rampart could be destroyed by limited disturbance, as may 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 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, and therefore the remains of the Phase 3 fort may be considered to be especially vulnerable.

Diversity. 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 small-scale cooking, possible ironworking, grain storage, and a cook-house. Perhaps the most important attribute of this fort is the evidence for the construction and reconstruction of its rampart.

Documentation. The archaeological evidence from the Phase 3 fort is supported by the drawn and paper archives from earlier fieldwork at the site. The excavated evidence is also supported by the detailed antiquarian and cartographic records of the site in the 18th-19th century.

Group value. 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. If proven, the existence of a contemporary civilian settlement would add further academic significance to the site.

Potential. As discussed above the Phase 3 fort has the potential to provide important information concerning the contemporary environment. It could also contribute towards an understanding of the changing nature of the military occupation of the site, and on a still wider canvas, to the wider appreciation of patterns of Roman military deployment.

Amenity value. The potential of this latest fort to contribute to the public presentation and interpretation of the site should be acknowledged.



## 10.7: Civilian settlement (Maps 2, 8-9)

Based on the limited evidence obtained to date, the identification of a civilian settlement at the site is only provisional, and its location is unknown, although proximity to the western fort defences may be suspected. It is also possible that the settlement could be located partly outside the study area, based on the evidence from Greensforge, Kinvaston and Wall, and the evidence from Greensforge and Kinvaston which suggests that some 'migration' of the settlement occurred away from the fort's immediate location.

### 10.7.1: Potential preservation

The areas of highest potential for archaeological survival in the possible settlement locations comprise land outside the *porta principalis sinistra* (Zone 5, 5.5, 5.7, and Zone 1, 1.1 and the canalside areas proposed for excavation later in 1999), and land adjoining the *porta principalis dextra* (Zone 3, 3.10, 3.11; Zone 4, 4.1), which notably are all located in areas of predicted high potential for archaeological survival.

### 10.7.2: Significance

The limited evidence for a civilian settlement at Metchley is assessed below using the non-statutory criteria.

Survival/condition. As may be suggested by the identification of the copper alloy finds group of probably civilian association within or adjoining the western defences, the possible civilian settlement could be located on this side of the fort, in which case at least part of such a settlement would be located within an area of high potential for archaeological survival (Zone 3, 3.9, 3.10; Zone 4, 4.1).

Period. Early Roman activity in the midlands is characterised by such dependant civilian settlements.

Rarity. There are no early Roman settlements currently known in the Birmingham area. The similarly located settlements of 1st-century date have only been archaeologically investigated on a relatively small scale, with the exception of Wall, Staffordshire, and Baginton, Coventry.

Fragility/vulnerability. The remains of such a civilian settlement may be more ephemeral, and thus more liable to disturbance, than buildings of military association. However, no features of definitely civilian association have yet been identified at the site.

Diversity. The range of features, artifacts and deposits is presently undefined.

Documentation. Not presently applicable.

Group value. The settlement remains would have added importance in being associated with some, or possibly all, of the military phases of occupation, and it is possible that some form of settlement continued after the suggested date for the military abandonment of the site.

Potential. 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).

Amenity value. The possible identification of a civilian settlement would enhance the potential of the site overall for public presentation and interpretation.

### **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.

## **11.0: FURTHER WORK**

### **11.1: Assessment aims**

This assessment has been intended to provide:

- an up-to-date summary of the results of archaeological excavation at the military complex.
- a summary of the archaeological content, or the predicted archaeological content, of each of the six zones (1-6) within the study area.
- a description of the modern land-use.
- an assessment of the potential degree of archaeological survival within each part of Zones 1-6.
- an assessment of potential survival and significance of the features associated with each of the major military phases at Metchley.

Based on this integrated assessment, the impact of specific development proposals can be assessed, and an appropriate curatorial response can be prepared.

### **11.2: Assessment of importance (Maps 8-9)**

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

<b>ZONE 1</b>	<b>1.1.</b>
<b>ZONE 2</b>	<b>None, with the exception of the areas proposed for excavation in later 1999.</b>
<b>ZONE 3</b>	<b>3.5, 3.8, 3.9, 3.10, 3.11</b>
<b>ZONE 4</b>	<b>4.1, 4.3 (parts excavated and unexcavated), 4.4, 4.5, 4.11</b>
<b>ZONE 5</b>	<b>5.1, 5.2, 5.3, 5.4, 5.5, 5.7</b>
<b>ZONE 6</b>	<b>6.3</b>

Based on national (PPG 16) and local government (Policy 8.36) 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 parts of Zone 4 form part of the Scheduled Ancient Monument. 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.

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 or 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/ dessicating 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: Other areas

In other areas of the site (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, preservation 'by record' may be acceptable. This alternative 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 appropriate alternative. Such a watching brief would again be followed by an agreed programme of post-excavation analysis, leading to publication of the results.

#### **11.4: 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) 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 by 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) 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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**TABLE 1: METCHLEY ROMAN FORTS, EARLY HISTORY**

1718	Sparry'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 2 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	<b>Area 7.</b> Evaluation and excavation of eastern annexe. BUFAU.

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

Key to measurements: (W) = width, (D)= depth	
<u>PHASE 1</u>	
<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 maximum 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 N. side of fort.
S1/PH1	Possible traces of northwestern corner tower (outside area fully exc.).
<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.
Eastern side not investigated 1963-97.	
<u>PHASE 2</u>	
<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 N. 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>
<u>PHASE 1</u>			
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.
<u>PHASE 2B</u>			
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 E.	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.
<u>PHASE 3</u>			
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 N-S. Alternatively, a possible cookhouse.

**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 backfilled Phase 2 ditch D2. Primary silts sealed by dumped destruction material.
	Area 3B (Figs. 7-8)
Outer ditch D3	Possibly re-cut during Phases 2-3.
Inner ditch D1a	Phase 1 basal silting sealed by sand/gravel from slighting of rampart.
	Area 4B
Ditch D6	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.
	Area 3 (Fig. 17)
Post-holes	Frontal revetment formed by post-holes (F0PH1-2), continuing similar arrangement on W. side of fort.
	Area 4 (Fig. 20)
Rampart	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.
	Area 3C (Fig. 20)
Rampart	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 2 for location of areas investigated.	



## **APPENDIX 2: Specification (Birmingham City Council)**

### **BIRMINGHAM CITY COUNCIL**

### **DEPARTMENT OF PLANNING AND ARCHITECTURE**

**Site of Metchley Roman Fort, University of Birmingham**

**SMR 02005, 20140, 01682, 05611: centre SP 0429 8368**

**Design Brief for *archaeological desk-based assessment* of entire site**

#### **1. Summary**

*Proposed developments by the University of Birmingham may affect buried archaeological remains of a Roman fort. This brief is for an archaeological desk-based assessment of the entire site and its surroundings, 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 site of the Metchley Roman forts lies to the north and south of Vincent Drive, on a plateau with slopes to the west, south and east. The site is currently occupied by various buildings, a grassed area, open waste land, roads and car parks, at various levels. The archaeological desk-based assessment is required for the whole of the forts as currently known, including the eastern and postulated southern annexes and a 50-metre wide zone beyond this to include Roman roads approaching the fort and any additional defensive lines or extramural features. The whole of this area must be included in the desk-based assessment so that the archaeological impact of any development proposals can be considered in the context of the entire fort.

#### **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 and landscaping. In advance of any development proposal affecting the archaeological remains of the fort, the City Council will require an assessment of its archaeological implications, consisting of a desk-based assessment and field evaluation, 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". 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 north-west corner of the fort is a scheduled ancient monument (West Midlands 1) and the whole fort and its surroundings have been identified as an area of potential archaeological importance by Birmingham City Council.

## APPENDIX 1: Glossary of terms used

All definitions after Johnson (1983, 34-5)

### 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*.

### Barrack-block components

*Arma*. Outermost room within a *contubernium*, used for equipment storage.

*Contubernium*. Two rooms within men's quarters, usually occupied by eight men.

*Papillio*. Innermost room of *contubernium*. Used for sleeping.

Special *contubernium*. 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*. 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.

## APPENDIX 2: Specification (Birmingham City Council)

### BIRMINGHAM CITY COUNCIL

### DEPARTMENT OF PLANNING AND ARCHITECTURE

Site of Metchley Roman Fort, University of Birmingham

SMR 02005, 20140, 01682, 05611: centre SP 0429 8368

**Design Brief for *archaeological desk-based assessment* of entire site**

#### **1. Summary**

*Proposed developments by the University of Birmingham may affect buried archaeological remains of a Roman fort. This brief is for an archaeological desk-based assessment of the entire site and its surroundings, 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 site of the Metchley Roman forts lies to the north and south of Vincent Drive, on a plateau with slopes to the west, south and east. The site is currently occupied by various buildings, a grassed area, open waste land, roads and car parks, at various levels. The archaeological desk-based assessment is required for the whole of the forts as currently known, including the eastern and postulated southern annexes and a 50-metre wide zone beyond this to include Roman roads approaching the fort and any additional defensive lines or extramural features. The whole of this area must be included in the desk-based assessment so that the archaeological impact of any development proposals can be considered in the context of the entire fort.

#### **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 and landscaping. In advance of any development proposal affecting the archaeological remains of the fort, the City Council will require an assessment of its archaeological implications, consisting of a desk-based assessment and field evaluation, 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". 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 north-west corner of the fort is a scheduled ancient monument (West Midlands 1) and the whole fort and its surroundings have been identified as an area of potential archaeological importance by Birmingham City Council.

#### **4.Existing archaeological information**

The extent of the Roman fort(SMR 02005/20140), the dates of its 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 in the former Genetics Field in 1998 revealed a hitherto unknown defensive line consisting of a ditch with accompanying rampart to the east of the defences of the earliest phase of the fort, and an evaluation on the south side of University Road West showed that this ditch continued around the south-east corner of the fort. Desk-based assessments for the West Car Park and the Genetics Field drew attention to a possible south-western annexe to the fort, mirroring that already known to have existed on its north-west. This is suggested by an earthwork bank and field boundary shown on historic maps. Other excavations beyond the main fort revealed prehistoric and post-medieval remains to the west(SMR 01682) and post-medieval remains to the north-east(SMR 05611).

#### **5.Requirements for work**

Assessments of the impact of proposed development on archaeological remains of the Roman fort have hitherto been undertaken for each development in turn. This has meant that the archaeological implications of proposed developments have not been defined until a particular site has already been identified for development and that decisions on the archaeological implications of individual development proposals have had to be made in relation to parts of the fort rather than the whole of it.

The desk-based archaeological assessment is required to define the likely extent, survival and significance of archaeological remains of the whole of the fort, including potential annexes and outer defensive lines and other features beyond the main defences. This will identify requirements for in-situ preservation or for further assessment by field evaluation in advance of consideration of specific development proposals. The desk-based archaeological assessment will augment and expand on those already carried out as part of recent developments.

#### **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 assessment should also refer to comparative information from other Roman forts. The archaeological desk-based assessment must include the following:

- (i) The whole of the forts as currently known, including the eastern and postulated southern annexes and a 50-metre wide zone beyond this;
- (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: 3 February 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
- 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 excavations (and evaluations)

## **APPENDIX 4: Criteria used in this report for assessment of survival and significance**

### 1) Criteria for assessment of potential archaeological survival

*The following criteria are used for the assessment of potential survival. This scheme of grading the potential archaeological survival of parts of the study area is not a substitute for field evaluation, but is intended to provide an informed basis for the definition of archaeological mitigation strategies, possibly including field evaluation if considered appropriate.*

**High** (Good archaeological survival predicted, with only minimal truncation. Includes some areas where survival will be especially good, because of modern dumping.)

- Areas where archaeological features and deposits may be well preserved beneath modern dumped deposits.
- Lawned areas, where little sub-surface disturbance by service-trenches may be anticipated.
- Areas of temporary car parking formed above topsoil level, which will have caused minimal sub-surface disturbance.
- Roads constructed over embankments.

**Moderate** (Some truncation predicted, but this is unlikely to be severe.)

- Footprints of single-storey buildings, or temporary buildings with raised floors, which may have caused some, limited, below-ground disturbance.
- Areas of car parking or hardstandings where some truncation to archaeological deposits may be anticipated.
- The sites of previous extensive excavations, where some further potential probably exists for additional excavation and recording of features and deposits.

**Moderate-low** (Severe truncation predicted. Also includes areas which could not be inspected.)

- Areas for which no information/no access was available.
- Areas where it is suspected that because of the modern/recent land-use only very small pockets of potential archaeological survival may be located.

**Poor** (No archaeological deposits anticipated.)

- Footprints of substantial brick or concrete buildings.
- Routes of major services (e.g. Elan Aqueduct) and subway.
- Lengths of roads constructed at, or below ground level.
- Areas of deep modern landfill.



## 2) Criteria for assessment of potential archaeological significance

### **A. The non-statutory criteria for the assessment of national importance.**

*(Planning Policy Guidance: Archaeology and Planning (PPG 16))*

Survival/condition: the survival of the monument's archaeological potential both above and below ground is a crucial consideration and needs to be assessed in relation to its present condition and surviving features.

Period: it is important to consider for preservation all types of monuments that characterise a category or period.

Rarity: there are some monument categories which in some periods are so scarce that all of them which still retain any archaeological potential should be preserved. In general, however, a selection must be made which portrays the typical and commonplace as well as the rare. For this, account should be taken of all aspects of the distribution of a particular class of monument not only in the broad national context but also in its region.

Fragility/vulnerability: highly important archaeological evidence from some field monuments can be destroyed by a single ploughing or unsympathetic treatment; these monuments would particularly benefit from the statutory protection which scheduling confers.

Diversity: some monuments have a combination of high quality features - others are chosen for a single important attribute.

Documentation: the significance of a monument can be given greater weight by the existence of records of previous investigation, or in the case of more recent monuments, by the support of contemporary written records.

Group value: the value of a single monument is greatly enhanced by association with a group of related contemporary monuments or with monuments of other periods. In the case of some groups it is preferable to protect the whole including the associated and adjacent land rather than to protect isolated monuments within the group.

Potential: on occasion the nature of the evidence cannot be precisely specified but it is possible to document reasons for anticipating probable existence and importance and so demonstrate the justification for scheduling.

### **B. Monument Protection Programme (MPP)**

Amenity value: the significance of the site in relation to its potential for public display and interpretation.