

EAST ANGLIAN ARCHAEOLOGY



# **Farming on the Edge: Archaeological Evidence from the Clay Uplands to the West of Cambridge**

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**Cover illustration:**

A selection of cleaned coins from the Childerley Gate hoard (photograph by Phil Parkes, Cardiff University)

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The names and full reports of each specialist are contained on the CD-ROM at the back of this volume. Their names and companies are also given in the list of contributors.

## Preface

The archaeological mitigation strategy for the A428 Caxton to Hardwick Improvement Scheme is the contractual companion to the A421 Great Barford bypass (Timby *et al.* 2007). Both schemes are part of the wider Cambridge to M1 Link and together formed the archaeological element of the largest Early Contractor Involvement (ECI) scheme of 2004. In contrast to Great Barford, where archaeology was first assessed in 1991, the Caxton to Hardwick scheme began in 1998 with the preparation of an Environmental Statement for a public enquiry in 2003 (Oxford Archaeology 2003). Issues of access restricted the ES to non-intrusive desk-based assessment and observation of soil geotechnical test pits in October 2001; consequently, the mitigation strategy began with further evaluation.

The contract, and therefore the archaeological mitigation process, started with the appointment in April 2004 of the design-and-build partnership Capita Symonds and Edmund Nuttall Ltd as the main contractors. Following a successful tender, geophysical survey and field artefact collection were undertaken by Albion Archaeology during summer and autumn 2004, with trial trenching delayed until June 2005 following a ministerial review. On 29th July 2005, the results of the evaluation provided the focus for a review attended by members of the contract team, Cambridgeshire County Council and the Highways Agency. The focus was on a mitigation strategy necessarily limited to preservation by record but nevertheless determined by research priorities in the county and the region (Brown and Glazebrook 2000, Glazebrook 1997). The result was a project in which development of the landscape was given priority over site-specific issues.

The road route lay along a clay ridge west of Cambridge that was largely agricultural land, although a short stretch crossed the northern boundary of Bourn Airfield. In contrast to the Great Barford Scheme, the region had been extensively investigated, reflecting

development of Cambourne new town and the expansion of Cambridge.

Nine locations were suggested by evaluation (Albion Archaeology 2004, 2005) as having the potential to contribute to the creation of a landscape history. This formed the basis of a tender invitation to a short list of contractors (Dawson 2005). Two sites, a Romano-British settlement which had produced a hoard containing 4,487 coins from the late 3rd century AD (Site 5) and an Iron Age settlement (Site 7), were identified for detailed investigation; the remaining sites were insufficiently characterised by evaluation and were of less certain significance. These were designated for Strip, Map and Sample (SMS). Site 1 comprised a series of linear ditches; Site 2 was close to an Iron Age settlement known from the Cambourne development; Site 3 was peripheral to a Roman-period settlement; and Site 4 was the location of a late moated enclosure. Further east, Site 8 comprised a number of Iron Age pits, whilst Site 9 had the potential to reveal prehistoric remains, and Site 10 was on the projected line of a Roman road considered to lie beneath or parallel to the A428. On the Caxton to Hardwick scheme, in common with Great Barford, SMS was used specifically to evaluate further the significance of areas with archaeological potential. At the completion of the Strip and Map part of the process, a period was designated in the management cycle for reviewing what had been uncovered and for the preparation of site-specific project designs.

Fieldwork restarted in September 2005 and continued until December when the post-fieldwork programme began. The results of the excavations were assessed, not only in-house by Albion Archaeology, but also through the mechanism of a research seminar. Hosted locally by Cambridgeshire County Council, colleagues from Cambridge University, neighbouring counties and those whose work or interests lay in the themes of the Caxton to Hardwick scheme, as well as other stakeholders, were

invited. The first draft of the Post-Fieldwork Assessment was made available to participants and the resulting Updated Project Design benefited from the review process explicit in the research seminar.

In common with the Great Barford part of the scheme, whilst significance and, therefore, value underpinned the mitigation strategy, the research seminar also confirmed the commitment to publication as a driving principle of the project. The publication which follows was initiated by fieldwork based on project designs with explicit objectives grounded in research priorities. The project was designed to ensure that the results of the fieldwork, filtered through the critical analysis of excavated data during the post-excitation process, would be published within a timescale which allowed the results to feed back into fieldwork practices. It was also designed to present the archaeology to the wider community at a time when the news of discovery was still current amongst the people of Cambridgeshire. Not only was such an approach explicit in the sub-contract arrangements and in the ECI contract for the main works, but it was carried through by a management approach which laid emphasis on key performance indicators, targets and consistent monitoring throughout the project, including post-fieldwork analysis.

This volume is the result of three years' intense effort in the field and in analysis. The Caxton to Hardwick

scheme constitutes the latter half of a two-part scheme, and reflects the high level of teamwork between archaeologists and the main contractors. In 2006 the combined scheme was runner-up in the British Archaeological Awards' Institute of Field Archaeologists Award and the Current Archaeology Developer-Funded Archaeology Award, presented in Birmingham on 6 November. The team which made the Caxton to Hardwick scheme a success included the Project Manager at the Highways Agency, Tim Hughes, and the managing agent at Jacobs Babbie, Pete Fasham. On the contractor's side were the Project Director at Edmund Nuttall, Adrian Savory, along with Jim Moran and Kevin Griffin; from the designers at Capita Symonds were Tansy Forest-Takano, the Environmental Manager, and Mike Needham, the road-scheme design-manager, and his successor Steve Draper. The scheme throughout was managed by Michael Dawson of CgMs, the Contractor's Archaeologist. The fieldwork team from Albion Archaeology was managed by Joe Abrams and supported by a variety of specialist staff, without whom the project could not have been achieved. This publication is a tribute to, and a reflection of, their enthusiasm and hard work.

Michael Dawson  
18 June 2007

## Structure of the publication

### The structural hierarchy

Although the context numbers that were issued during the course of excavation are retained within the archive, the results of the excavations are presented in this publication by successively larger and more interpretative agglomerations of contexts, *i.e.* Sub-Groups (SG), Groups (G) and Land-use areas (L), which in turn are assigned to specific chronological Phases (see Table 1). These entities, rather than individual contexts, are illustrated on the figures within this volume.

The full structural hierarchy (down to Sub-Group level) is presented in Appendix 1 on the CD-ROM. It is organised by Land-use area, each of which is accompanied by a plan identifying its constituent Groups.

### The printed volume

This volume presents the results of the archaeological fieldwork, organised into dated Phases to form a chronological narrative. It represents a high level integration of the contextual data and the specialist reports contained within the CD-ROM.

### The CD-ROM

The CD-ROM, supplied at the back of this volume, contains Appendices 1–17. The contextual information presented in Appendix 1 is the end-product of the analysis of each deposit and feature that was recorded within the excavated areas. It is not an exhaustive list of context numbers with associated technical descriptions; that

information is held digitally and in hard copy as part of the excavation archive. Instead, it represents an interpretation of the fieldwork records, organised within the structural hierarchy described above.

Appendices 2–17 contain the full results of each area of specialist analysis as stand-alone reports. These specialist appendices present the individual methodologies and more detailed cross-referenced data, often in the form of tables and catalogues.

The excavation archive will be deposited with the Cambridgeshire County Stores.

<i>Hierarchical element</i>	<i>Example</i>
Phase	Phase 2.1: middle Iron Age
Land-use area	L5: farmstead
Group	G27: domestic enclosure
Sub-Group	SG117: construction of ditch
Context	7011: segment of ditch cut

Table 1 Structural hierarchy developed during analysis

## Summary

In 2005 and early 2007, Albion undertook a series of archaeological investigations to the west of Cambridge in advance of the construction of a new dual carriageway for the A428 Caxton Common to Hardwick Improvement Scheme. An extensive evaluation led to the targeted excavation of nine separate sites, totalling 9.9ha.

The road corridor traversed a plateau of higher ground (57–70m OD) on the northern side of the Bourn Valley, which defined the route of an unmetalled ridgeway from at least the Iron Age until the construction of the St Neots to Cambridge road in the 19th century. For most of this period, the land was used primarily for agriculture. Because of its heavy clay soils and exposed location, it was not favoured for settlement, which was mainly concentrated on the lower ground to either side. A significant exception to this was during the middle Iron Age to sub-Roman period, when a number of farmsteads were established. At this time, a network of drove-ways criss-crossed the area, linking the farmsteads and a number of livestock enclosures.

Four farmsteads, three of which were previously unknown, were identified. They are all likely to have followed a mixed pastoral / arable regime, although little ecofactual evidence for arable cultivation was recovered. However, an extensive area of early Roman fields, probably used for arable farming, was identified between Ermine Street and Childerley Gate. These field systems are notable for their alignment with Ermine Street, contrary to the predominantly NE–SW alignment of the main topographic features in this area. They may indicate that, in the Roman period, the landscape was being structured at more than a purely local level.

The earliest of the four farmsteads was at Scotland Farm (Sites 7 and 8); it was occupied between the 4th and the 1st centuries BC. Large enclosure ditches with earthen banks were the pre-eminent feature of this farmstead, which also contained several roundhouses and produced evidence of domestic and small-scale craft activity. A 2nd–3rd-century Roman farmstead was identified at Ash Plantation (Site 2). Only part of the farmstead fell within

the excavated area, but it seems to have been a small, low-status agricultural settlement. The largest of the farmsteads was at Childerley Gate (Site 5); it was established in the 2nd century in the form of a ladder system and was substantially reorganised at the beginning of the 4th century. There is a possibility that it may have continued in use as a settlement into the sub-Roman period in the 5th century. The 4th-century farmstead identified at Bourn Airfield (Site 3) also seems to have had a relatively low status, although its north–south orientation suggests that it may represent a minor roadside settlement.

There are signs that the Childerley Gate farmstead may have belonged to a larger, possibly imperial estate, with the regularity of its initial layout suggesting that it was planned. There is a further suggestion that it may have changed hands, perhaps becoming a veteran settlement, when it was reorganised at the beginning of the 4th century, not least due to the recovery of a hoard of 4,487 Roman coins that was buried at that time, within a farmstead that does not seem previously to have had a monetised economy.

With the abandonment of the Roman farmsteads, no further settlement activity was identified along the northern edge of the Bourn Valley. The ridgeway probably continued in use, and the high ground would have been available for common grazing by the more low-lying settlements to either side. However, in the 12th–13th centuries, large areas of the high ground were brought into cultivation as an increase in population put pressure on the traditional open fields. From this time onwards, and particularly as a result of enclosure, the route across the plateau became narrower and more tightly defined. The setting out of the Childerley Estate was a significant part of this process; a 16th-century moated garden feature associated with the estate was excavated at Childerley Chapel (Site 4). With the creation of a metalled road along the top of the ridge in the 19th century, the landscape finally took the form it has largely retained up to the present day.

## Résumé

En 2005 et au début de 2007, Albion entreprit une série de recherches archéologiques à l'ouest de Cambridge antérieurement à la construction d'une nouvelle route à quatre voies conduisant de l'A428 Caxton Common à Hardwick Improvement Scheme. Une évaluation approfondie a permis de mettre à jour de façon ciblée neuf sites distincts correspondant à une superficie de 9,9 ha.

Le couloir formé par la route traversait un plateau en hauteur (de 57 à 70 m au-dessus du niveau de la mer) sur le côté nord de la Bourn Valley, et dessinait une voie sans revêtement sur la crête depuis au moins l'âge du fer jusqu'au moment de la construction au dix-neuvième siècle de la route menant de St Neots à Cambridge. Pendant pratiquement toute cette période, la terre était essentiellement destinée à l'agriculture. En raison de son exposition et de la nature des sols formés d'une argile lourde, l'emplacement ne convenait pas à une implantation. Les implantations étaient en effet principalement concentrées sur les terrains en contrebas qui étaient situés de chaque côté. La période allant de l'âge du fer moyen à la période sub-romaine constitue toutefois une exception puisqu'un certain nombre de fermes furent alors établies. A cette époque, un réseau de voies privées parcourait la zone et reliait les fermes à un certain nombre d'enclos pour le bétail.

Quatre fermes furent identifiées, dont trois étaient jusqu'à présent inconnues. Il est probable que ses habitants à la fois cultivaient la terre et élevaient du bétail, bien que l'on ait retrouvé peu d'écofactes en matière de culture. Toutefois, une large étendue de champs utilisés pour la culture et datant des débuts de la période romaine fut identifiée entre Ermine Street et Childerley Gate. Ces systèmes de champs sont remarquables pour leur alignement avec Ermine Street, qui s'oppose à l'alignement nord-est sud-ouest. Celui-ci prédomine pour les principales caractéristiques topographiques de cette zone. Cela peut être le signe que, pendant la période romaine, le paysage était structuré à un niveau qui n'était pas purement local.

La ferme la plus ancienne se trouvait à Scotland Farm (sites 7 et 8) et elle était occupée entre le quatrième siècle avant notre ère et le premier siècle de notre ère. De grandes enceintes à fossés avec des bords en terre constituaient le trait caractéristique de cette ferme qui possédait également plusieurs rotondes et abritait une petite activité artisanale au sein de la famille, dont il reste quelques traces. Une ferme romaine datant du deuxième et du troisième siècles fut identifiée à Ash Plantation (site 2). La zone fouillée ne

comprenait qu'une partie de la ferme, toutefois il semble qu'il s'agissait d'une petite implantation agricole de condition inférieure. La plus grande des fermes, qui se trouvait à Childerley Gate (site 5); fut établie au deuxième siècle sous la forme d'un système d'échelles et fut largement réorganisée au début du quatrième siècle. Il est possible que cette ferme ait continué d'exister comme implantation jusqu'à la période sub-romaine au cinquième siècle. La ferme du quatrième siècle identifiée à Bourn Airfield (site 3) semble également être d'un niveau social assez peu élevé, bien que son orientation nord-sud suggère qu'il s'agissait peut-être d'une implantation mineure située en bord de route.

Certains indices permettent d'affirmer que la ferme de Childerley Gate appartenait peut-être à une propriété plus grande, éventuellement impériale. Ainsi, la disposition initiale de la ferme, par sa régularité, suggère l'existence d'un plan d'ensemble. Il est également possible que la ferme ait changé de mains et soit devenue une implantation de vétérans lors de sa réorganisation au début du quatrième siècle, notamment en raison de la récupération d'un trésor de 4,487 pièces romaines. Celles-ci furent enterrées à cette époque dans une ferme qui ne semble pas avoir connu précédemment une économie monétarisée.

Avec l'abandon des fermes romaines, il n'a pas été possible d'identifier des activités d'implantation sur le côté nord de la Bourn Valley. Il est probable que la voie a continué d'être utilisée, de même que les habitants des implantations situées des deux côtés plus en contrebas se servaient des hautes terres comme pâturages communs. Toutefois, une partie importante des hautes terres fut cultivée aux douzième et treizième siècles, l'augmentation de la population entraînant une exploitation excessive des champs ouverts traditionnels. A partir de cette époque, la route qui traversait le plateau devint plus étroite et fut tracée avec une plus grande précision, surtout en raison de la construction d'enceintes. La disposition de Childerley Estate représentait une part importante de ces évolutions et un jardin fossoyé datant du seizième siècle qui était associé à la propriété fut fouillé à Childerley Chapel (site 4). La construction au dix-neuvième siècle d'une route pourvue d'un revêtement sur la ligne de crête a finalement donné au paysage la forme qu'il a largement conservée jusqu'à nos jours.

(Traduction: Didier Don)

# Zusammenfassung

Im Jahr 2005 und zu Beginn des Jahres 2007 führte Albion Archaeology westlich von Cambridge eine Reihe archäologischer Untersuchungen vor dem Bau einer neuen vierspurigen Schnellstraße im Rahmen des Ausbaus der A428 zwischen Caxton Common und Hardwick durch. Eine ausführliche Voruntersuchung führte zur gezielten Ausgrabung von neun getrennten Stätten, die insgesamt 9,9ha Land umfassten.

Der Straßenkorridor verlief über ein leicht erhöhtes Plateau (57–70m ü. NHN) an der Nordseite des Bourn Valley, das vor dem Bau der Straße von St Neots nach Cambridge im 19.Jh. den Verlauf eines unbefestigten, zumindest bis in die Eisenzeit zurückreichenden Höhenwegs definierte. Während des Großteils dieser Zeit wurde das Land überwiegend landwirtschaftlich genutzt. Aufgrund seiner schweren Lehmböden und seiner exponierten Lage kam es nicht für eine menschliche Besiedelung in Betracht, die hauptsächlich auf das tiefere Gelände zu beiden Seiten konzentriert war. Eine wichtige Ausnahme bildete der Zeitraum von der mittleren Eisenzeit bis zur nachrömischen Zeit, in der hier mehrere Gehöfte angesiedelt wurden. Zur damaligen Zeit war das Gebiet von Viehwegen durchkreuzt, die die Gehöfte mit einer Reihe von Viehweiden verbanden.

Es wurden vier Gehöfte identifiziert, von denen drei zuvor unbekannt waren. Obwohl im Umweltmaterial nur geringe Hinweise auf einen Feldanbau gefunden wurden, ist zu vermuten, dass alle Gehöfte eine Mischkultur aus Weideland und Ackerbau betrieben. Zwischen der Ermine Street und Childerley Gate wurden weitläufige Felder aus der frühen Römerzeit entdeckt, die vermutlich ackerbaulich genutzt wurden. Diese Feldsysteme folgen derselben Ausrichtung wie die Ermine Street, anders als die sonst übliche NO-SW-Ausrichtung der topografischen Hauptmerkmale in diesem Gebiet. Dies könnte darauf hindeuten, dass die Landschaft in der Römerzeit auf eine Weise strukturiert war, die über die lokale Ebene hinausreichte.

Das älteste der vier Gehöfte, das vom 4. bis 1.Jh. v.Chr. besiedelt war, lag bei Scotland Farm (Grabungsstellen 7 und 8). Bei diesem Gehöft fielen vor allem die umfangreichen Befestigungsgräben mit ihren Erdwällen auf. Zudem enthielt es mehrere Rundbauten und Hinweise auf häusliche und kleingewerbliche Aktivitäten. Ein römisches Gehöft aus dem 2./3.Jh. wurde bei der Ash

Plantation (Grabungsstelle 2) ausgemacht. Nur ein Teil des Gehöfts lag innerhalb der Grabungsstelle. Vermutlich handelte es sich um eine kleine Agrarsiedlung von niederem Rang. Das größte Gehöft war bei Childerley Gate zu finden (Grabungsstelle 5). Es wurde im 2.Jh. in Form eines »Leiterschemas« (»ladder system«) angelegt und zu Beginn des 4.Jh. erheblich umgestaltet. Es scheint möglich, dass es bis in die nachrömische Zeit im 5.Jh. besiedelt war. Das aus dem 4.Jh. stammende Gehöft beim Bourn Airfield (Grabungsstelle 3) war offenbar ebenso von relativ geringem Status, auch wenn seine Nord-Süd-Ausrichtung darauf hinweist, dass es möglicherweise direkt an der Straße angesiedelt war.

Verschiedenen Anzeichen zufolge war das Gehöft bei Childerley Gate Teil eines größeren, womöglich kaiserlichen Anwesens, da der sehr regelmäßige Originalgrundriss auf eine geplante Anlage hindeutet. Darüber hinaus existieren Hinweise darauf, dass es bei seiner Umgestaltung zu Beginn des 4.Jh. möglicherweise in andere Hände überging und als Veteranensiedlung genutzt wurde. Zu diesen Hinweisen zählt die Entdeckung eines aus 4487 römischen Münzen bestehenden Hortes, der zur damaligen Zeit in einem Gehöft vergraben wurde, das zuvor offenbar keine Geldwirtschaft kannte.

Nach Aufgabe der römischen Gehöfte fanden sich am Nordrand des Bourn Valley keine weiteren Hinweise auf eine Siedlungstätigkeit. Der Höhenweg war wahrscheinlich weiter in Gebrauch, dazu dürfte das höher gelegene Gelände von den tiefer liegenden Siedlungen zu beiden Seiten als gemeinsamer Weidegrund genutzt worden sein. Im 12. und 13.Jh. wurden große Bereiche des höheren Geländes in ein Anbaugelände verwandelt, da die traditionelle Feldwirtschaft durch die Bevölkerungszunahme unter Druck geriet. In der Folgezeit verlor der Weg über das Plateau hinweg vor allem aufgrund der Einhegung an Breite und war klarer definiert. Die Anlage des Childerley Estate spielte dabei eine wesentliche Rolle. Bei der Childerley Chapel wurde ein aus dem 16.Jh. stammender grabenbewehrter Garten ausgegraben, der zum Gut gehörte (Grabungsstelle 4). Mit dem Bau einer Schotterstraße auf dem Kamm nahm die Landschaft im 19.Jh. im Wesentlichen die Gestalt an, die sie bis heute aufweist.

(Übersetzung: Gerlinde Krug)

# 1. Introduction

## 1.1. Location and circumstances of the fieldwork

(Figs 1.1–1.2)

A programme of archaeological investigation was undertaken as part of the A428 Caxton Common to Hardwick Improvement Scheme, which involved the creation of a c. 7.6km long stretch of dual carriageway. The new road runs from the Caxton Gibbet roundabout in the west to the A14/Cambridge junction in the east, on either side of a stretch that had already been dualled during the creation of the new town at Cambourne. Albion was commissioned by Edmund Nuttall Capita-Symonds, via CgMs Ltd, to undertake the archaeological work.

The A428 traverses a plateau of higher ground that extends from St Neots in the west to Cambridge in the east. In general, the land is relatively flat and comprises large, open fields, most of which were under arable cultivation prior to the fieldwork. The Bourn Valley lies to the south, whilst the land to the north drops away to form a series of small ridges and shallow valleys, which drain into the River Great Ouse.

Fieldwalking, geophysical survey and trial trenching were used to evaluate the archaeological potential of the land affected by the road scheme (Albion Archaeology 2004; 2005). This process initially identified ten areas where significant archaeological remains were likely to be present, although reconsideration of the potential of Site 6 meant that no further work was done there. Excavations subsequently took place at Sites 1, 2, 3, 4, 5, 7, 8 and 9 between September and December 2005; Site 10 was excavated in February 2007 (Figs 1.1 and 1.2).

## 1.2. Site names and numbers

In this volume, the nine excavations are identified by both a name and a number, as shown in Table 2.

## 1.3. Preservation of the evidence

The soils of Cambridgeshire have been heavily exploited by arable agriculture, and modern ploughing has had a significant detrimental impact on the type and quality of archaeological evidence that survived within the excavations. The depth of topsoil and subsoil overlying the undisturbed geological deposits rarely exceeded 0.5m, and no subsoil had survived modern ploughing on parts of Site 5 at Childerley Gate. The widespread truncation of archaeological remains by modern ploughing has been documented on a regional and national level through the *Management of Archaeological Sites in Arable Landscapes Project* (DEFRA/OAU 2002), which included several Cambridgeshire sites (Abrams and Macaulay 2001). However, plough damage started to occur long before the modern era, and the widespread remnants of ridge and furrow field systems, themselves largely ploughed out, are an indicator of the damage caused to the archaeological remains during the medieval period.

More localised damage was caused by the construction of post-medieval and modern field boundaries, and the extensive use of ceramic land-drains. Although this rarely led to the destruction of features in their entirety, it caused artefacts to be displaced from their original context. Modern service pipes and airfield construction also caused a degree of localised damage, but this was confined to the sites at Camford Way (Site 10) and Bourn Airfield (Site 3) respectively.

Most of the significant remains identified by the nine excavations dated to the Roman period, with a smaller proportion dating to the Iron Age. In both cases, the remains on individual sites tended to belong to a single period, and comprised farmsteads, field systems and associated drove-ways. The only elements of this agricultural landscape that survived well were deep features such as ditches and pits; evidence for more superficial structures such as hearths, post-holes, floors and wheel ruts had largely been destroyed by ploughing.

Site Name	Site Number	Phases represented (by period)										
		Bronze Age	Iron Age		Roman				Sub-Roman	Medieval	Post-medieval	
		1	2.1	2.2	3.1	3.2	3.3	3.4	4	5	6	7
Caxton Gibbet	1				■							
Ash Plantation	2	■				■	■	■				
Bourn Airfield	3			■		■	■		■			
Childerley Chapel	4				■	■	■	■	■		■	
Childerley Gate	5				■	■	■	■	■		■	
Scotland Farm	7 and 8		■	■		■			■			
Hardwick	9				■	■						
Camford Way	10				■	■					■	■

Table 2 Phases of activity identified on each site

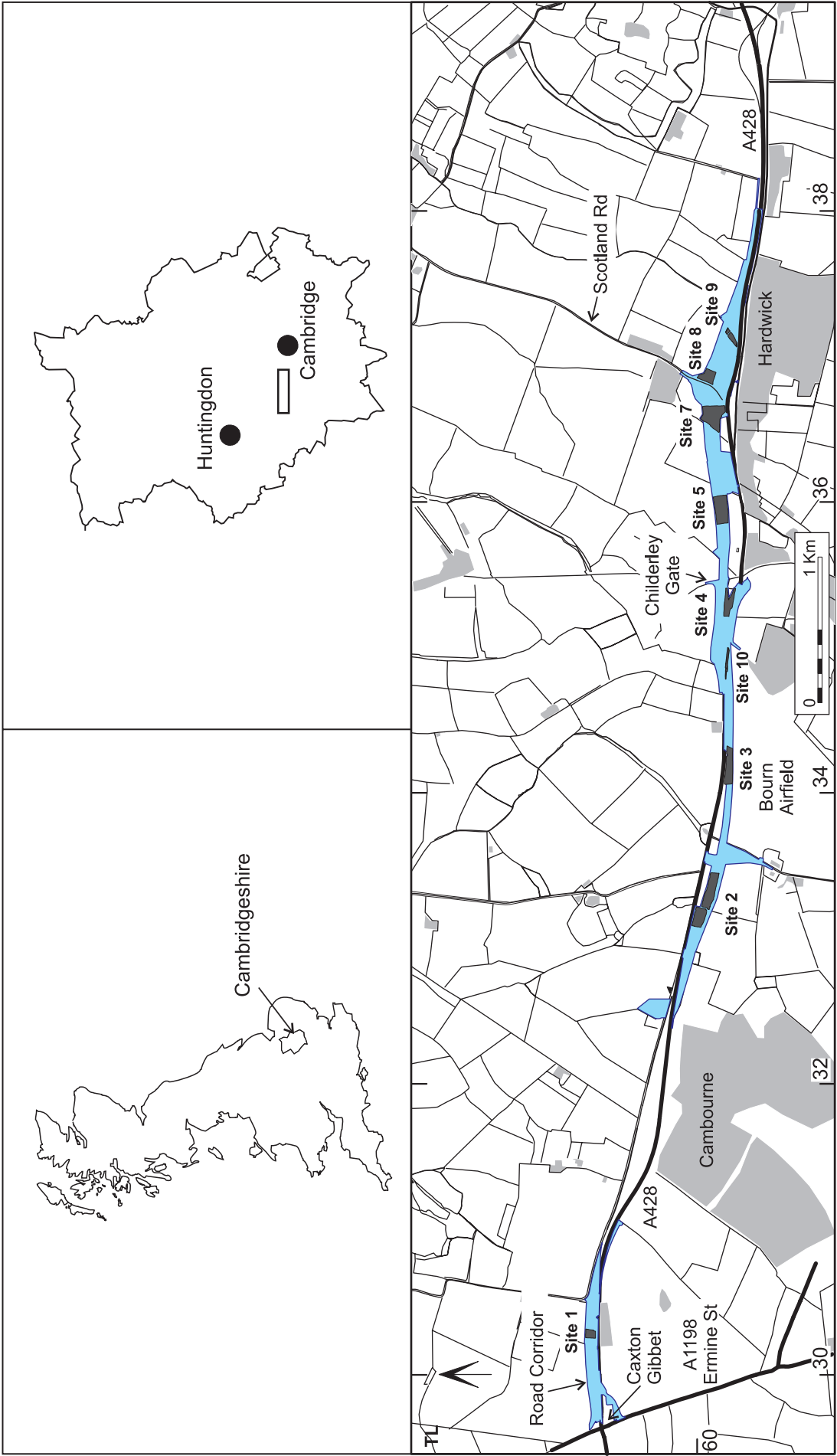


Figure 1.1 Location of the road scheme



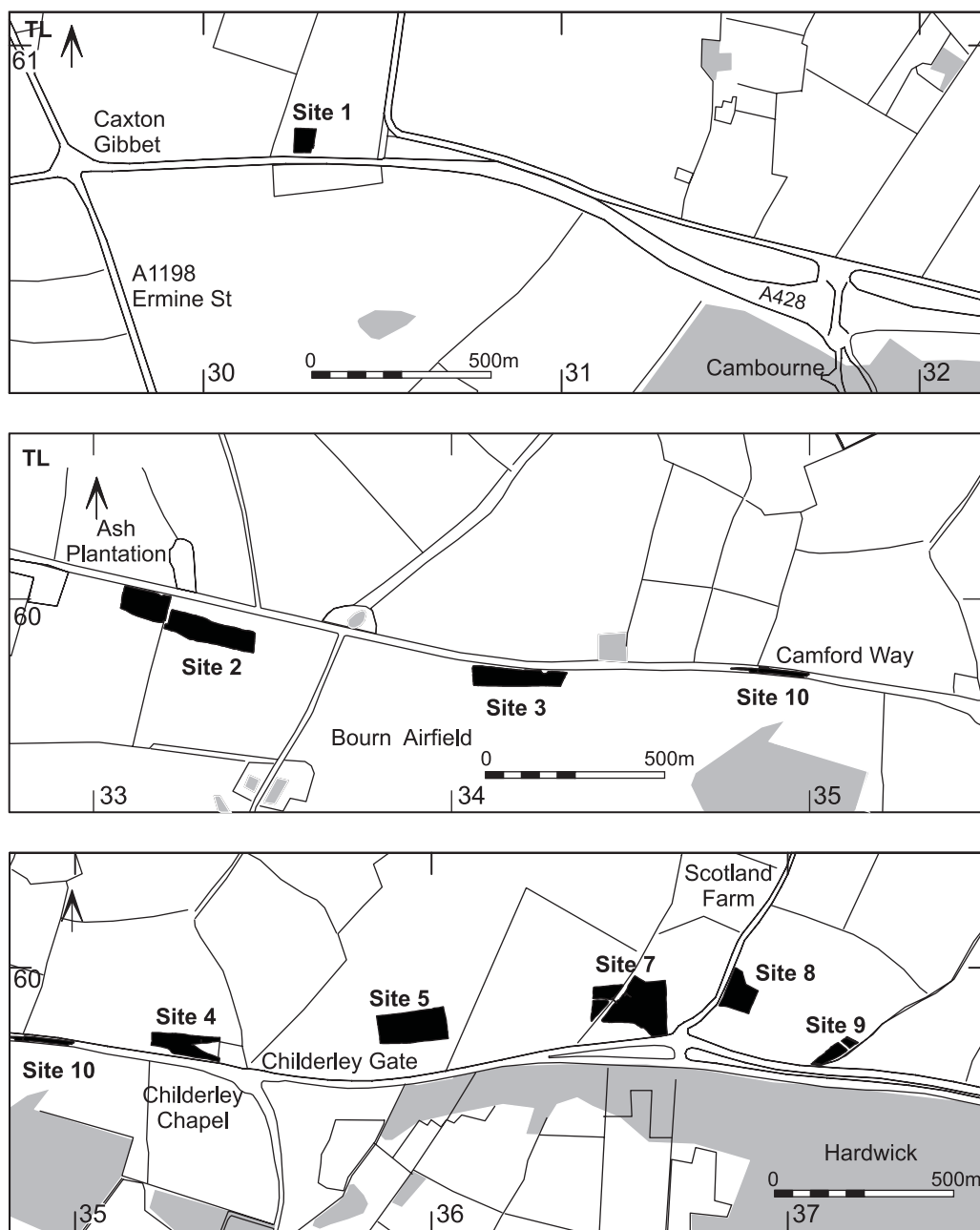


Figure 1.2 Location of excavation sites in relation to the 20th-century A428

Buildings could only be identified through the presence of eaves drip gullies and beam slots. The paucity of surviving burnt structures significantly reduced the potential for recovering charred plant remains from primary contexts, and also precluded the use of archaeomagnetic dating. Despite a concerted effort to identify and retrieve material from any features which would be suitable for scientific dating, no such material was recovered.

#### 1.4. Geological background and topography (Figs 1.3–1.4)

The drift geology along the northern edge of the Bourn Valley consists almost exclusively of a thick blanket of boulder clay, with occasional outcrops of degraded chalk (marl), derived from the underlying Cretaceous beds. The boulder clay in this part of Cambridgeshire is likely to date

to the Anglian Glaciation, which reached its peak around 500,000 years ago.

The topography of the road corridor is depicted on Figures 1.3 and 1.4, which show (in coloured contours) the relatively high (c. 65m OD) east–west plateau traversed by the road. On the northern side of this plateau the land slopes downwards towards the fens and the River Great Ouse, while the Bourn Valley lies to the south.

#### 1.5. Geoarchaeological background (Fig. 1.5)

The east–west plateau forms the northern edge of the Bourn Valley and affects the land on either side in a number of ways. The most important of these is a series of NE–SW aligned shallow valleys on its slopes, formed in the early Holocene by water from the melting ice sheets.

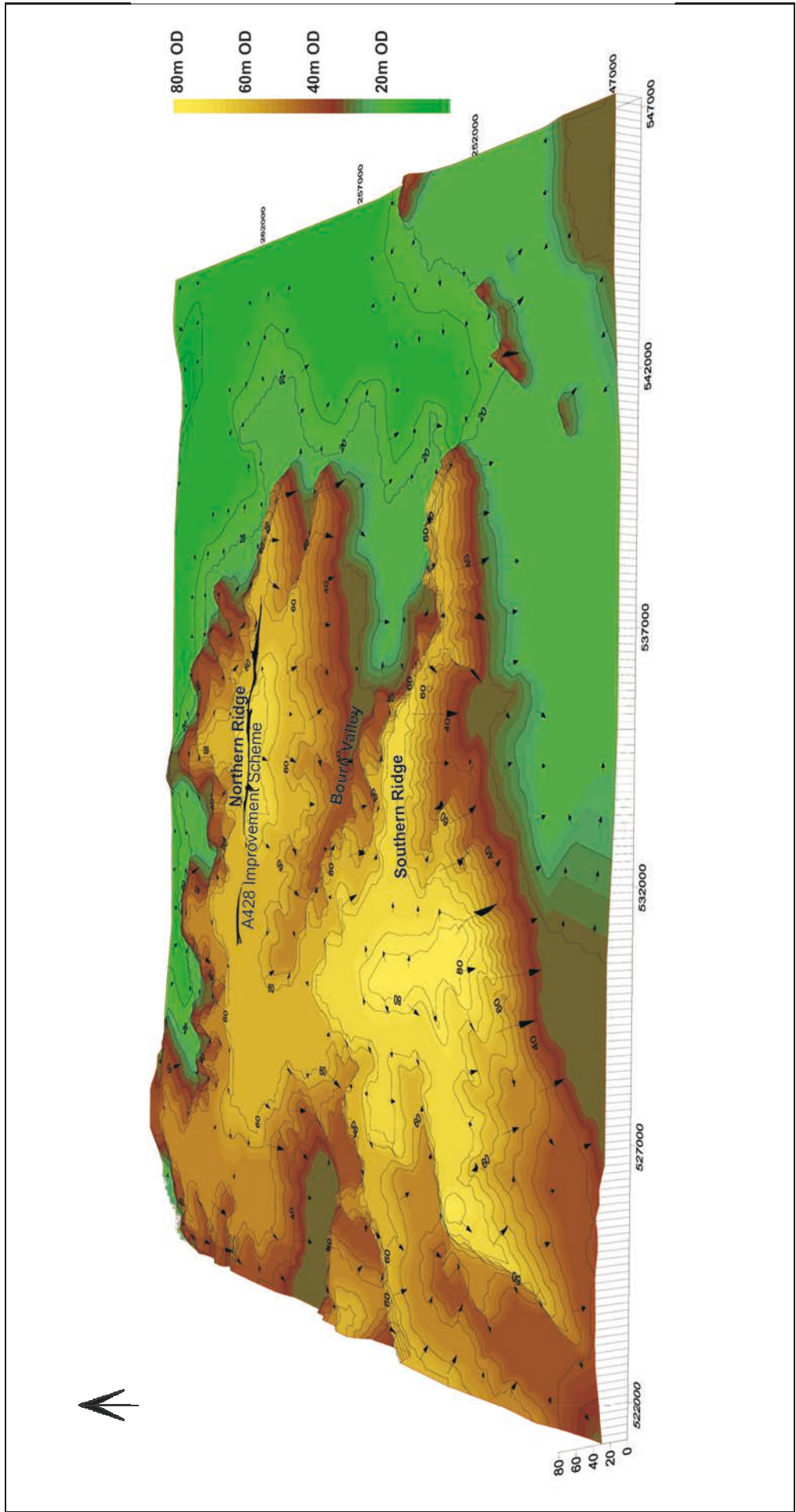


Figure 1.3 The topography of the Bourn Valley

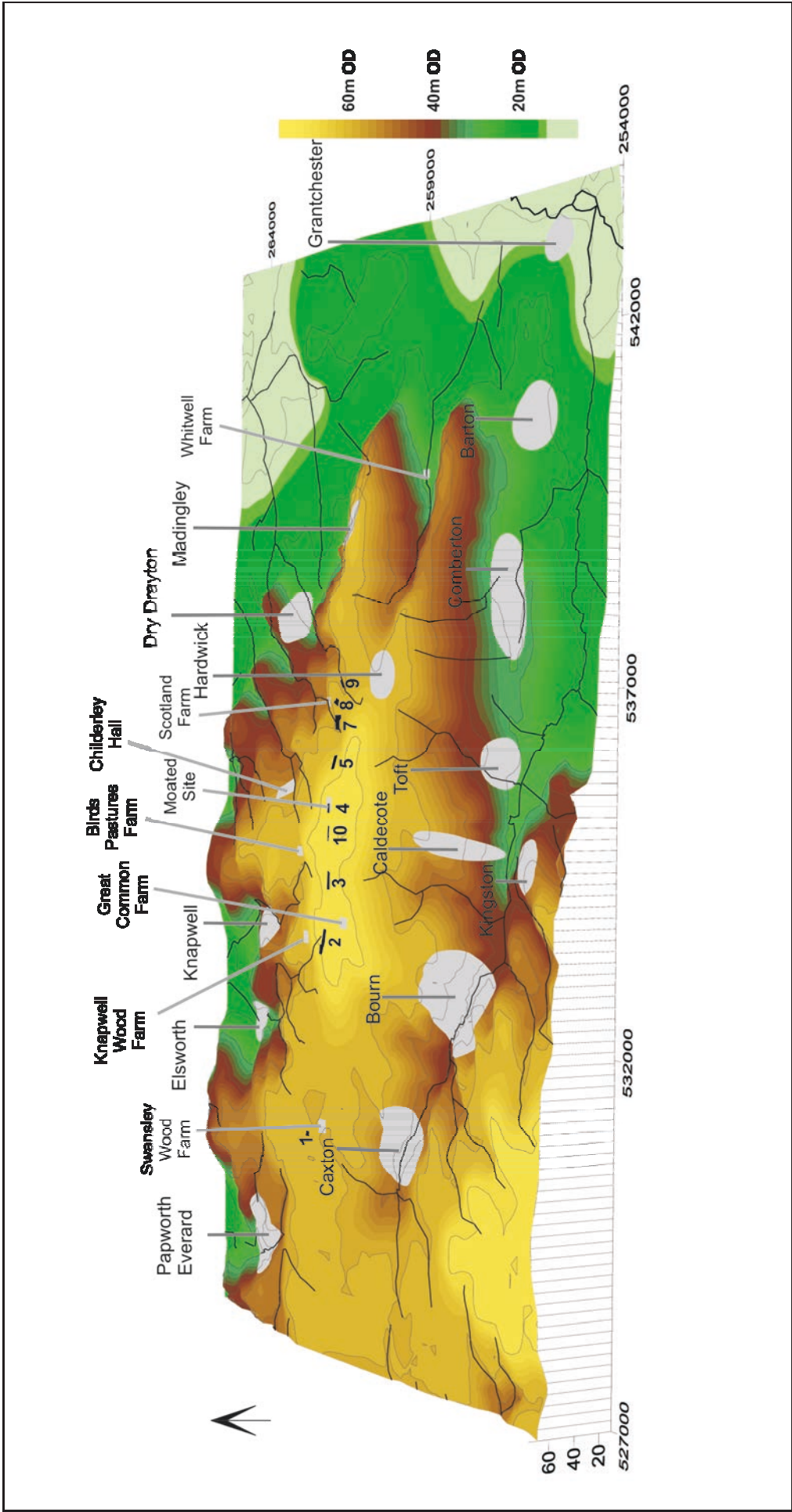


Figure 1.4 The topography of the northern ridge of the Bourn Valley

These shallow valleys drain water from the ridge into the Bourn Brook to the south, and the River Great Ouse and the fens to the north. The palaeochannels that created these relatively deep channels largely silted up during the early to middle Holocene, with some of them developing into small, seasonal streams (winterbournes) during the late Holocene.

Narrow ditches have been dug along some of these winterbournes in order to enhance their drainage capacity, helping to protect neighbouring agricultural land and settlement areas from flooding. This process may have begun as early as the Iron Age (Chapters 2.2.5 and 6.2). The Dam Brook and the Callow Brook are examples of winterbournes that have been enhanced in this way (Fig. 1.5). The Dam Brook bisected Site 7 at Scotland Farm, while the Callow Brook was located immediately east of Site 9 at Hardwick.

The presence of these shallow valleys, and the winterbournes they contain, exacerbates the tendency of the heavy gault clays in the base of the Bourn Valley to flood, and hold water, for much of the winter. Regular episodes of flooding would have been of major significance to communities living and farming in the vicinity of the winterbournes, hence the need to enhance and maintain their drainage capacity. This link between local topography and human use of the landscape is a major theme running through this publication.

### 1.5.1. Palaeochannels / winterbournes G25 at Scotland Farm (Site 7) and G66 at Hardwick (Site 9) (Fig. 1.5)

The excavation at Scotland Farm (Site 7) afforded the opportunity to carry out a geoarchaeological study (Appendix 11) of the processes which led to the creation, and subsequent development, of one of the shallow valleys on the northern side of the plateau. The results can be extrapolated to explain the similar topography and deposits on Site 9 at Hardwick (Fig. 1.5). An auger survey

demonstrated that the palaeochannel at Scotland Farm was up to 1.75m deep and *c.* 10m wide, although inclusion of the deposits fanning out beyond the main channel gives it a maximum width of *c.* 24m. It was also demonstrated that alluvial silts within the channel both sealed elements of the adjacent middle Iron Age farmstead and were cut through by them (Chapter 2.2). This illustrates that, although no longer a palaeochannel, this feature was still active as a winterbourne during the middle Iron Age, with some of its associated fanning deposits laid down after that time.

The deposits within the palaeochannel / winterbourne comprised a series of fine-grained minerogenic alluvial clays; those within the main channel were greyish in colour, whereas those within the fanning deposits were brown. The fine nature of the sediment suggests that the palaeochannel / winterbourne flowed sluggishly, with still water at its margins, and would have had insufficient energy to carry coarser-grained sediments. The greyer, gleyed appearance of the deposits within the main channel suggests they were formed under predominantly waterlogged conditions, with little opportunity for them to become dry and oxidised. The browner fanning deposits are likely to have been derived from the heavy clay subsoil, as well as boulder clay from further upslope. Slope erosion, and the effects of water runoff down the slope, would have carried this material into the main course of the palaeochannel / winterbourne, with flooding then depositing the clays in a fan under conditions of standing water. The brown colour of the fanning deposits suggests that flooding would have been ephemeral and intermittent, allowing areas adjacent to the channel to dry out and oxidise the flood sediments.

The palaeochannel / winterbourne at Hardwick was *c.* 13m wide and 1.2m deep, and contained deposits similar to those seen at Scotland Farm. Both are likely to have formed under identical Holocene environmental conditions.

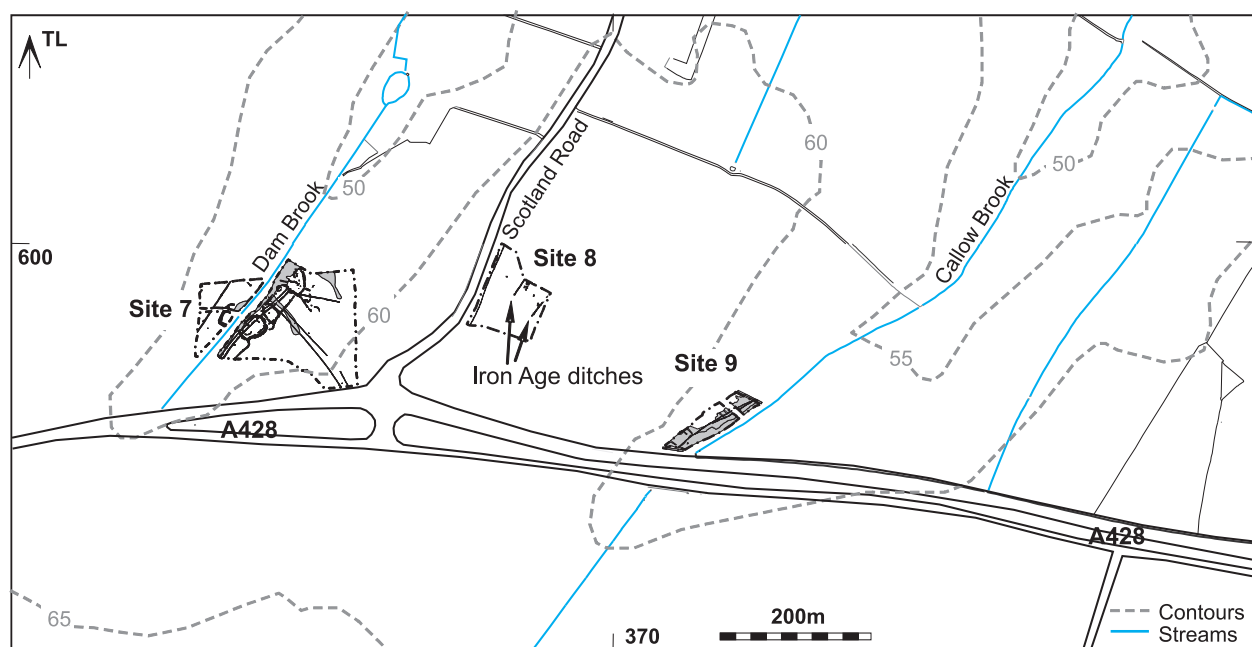


Figure 1.5 Scotland Farm (Sites 7 and 8) and Hardwick (Site 9) shown in relation to local topography and the Dam and Callow Brooks

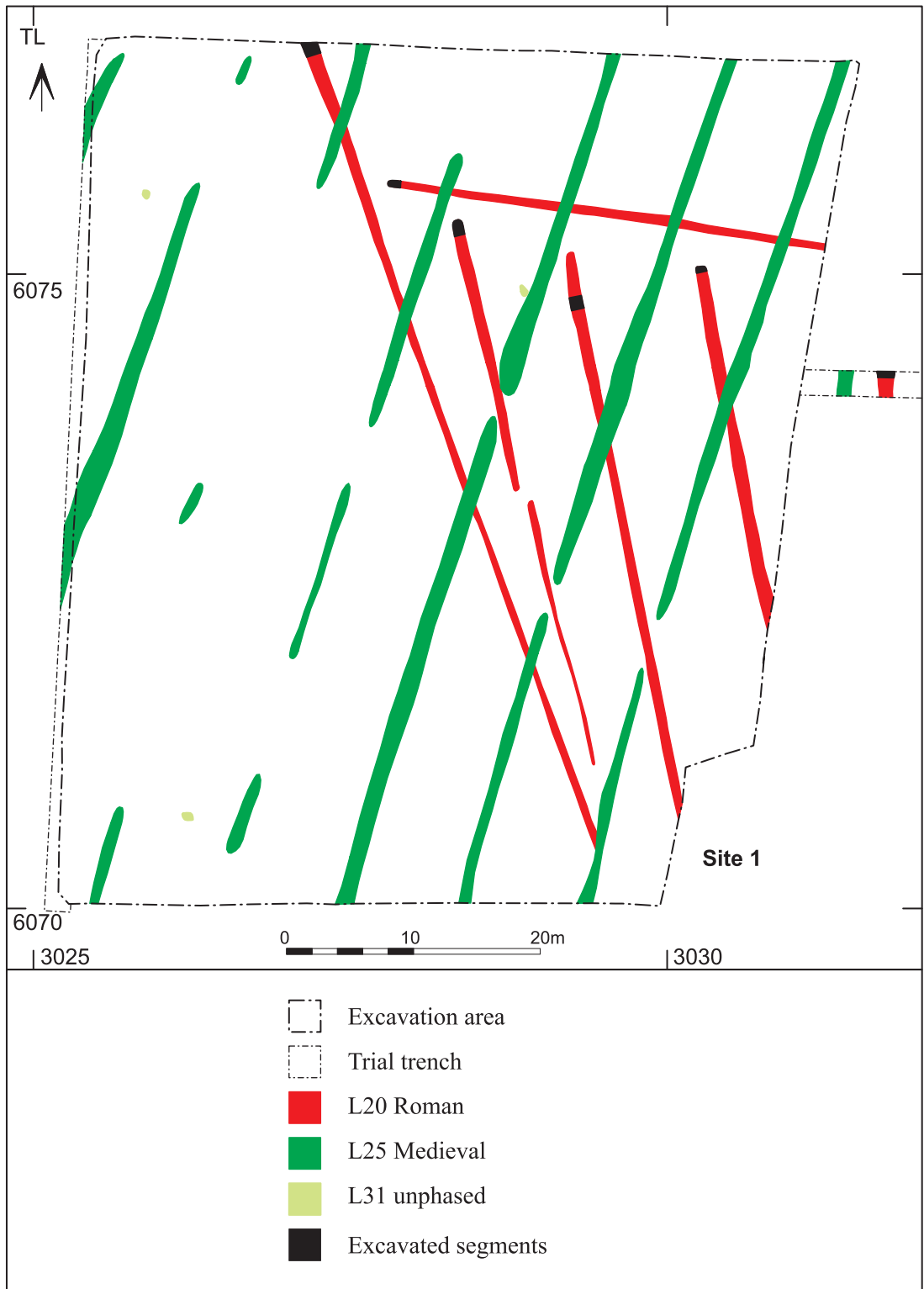


Figure 1.6 Multi-phase plan: Caxton Gibbet (Site 1)

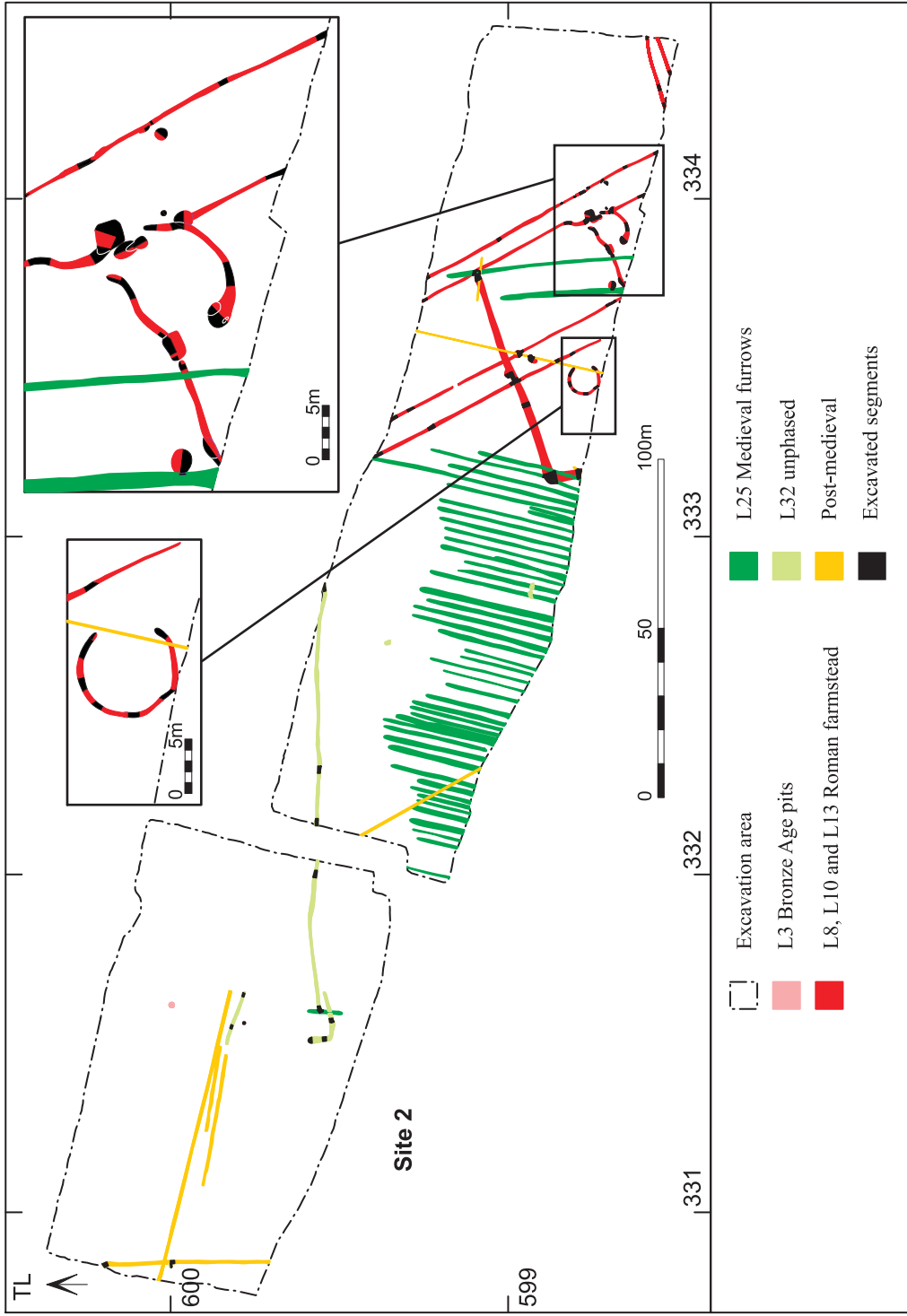


Figure 1.7 Multi-phase plan: Ash Plantation (Site 2)

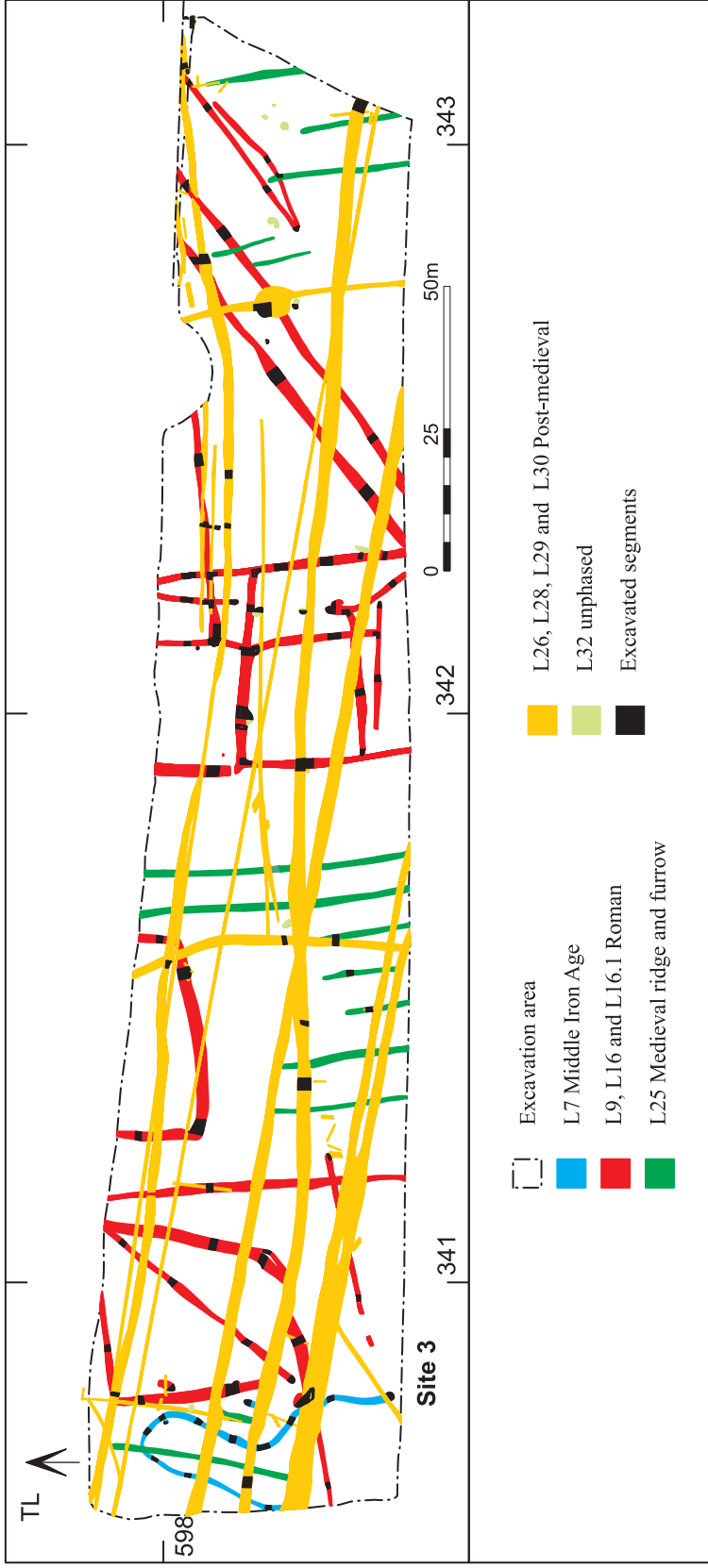


Figure 1.8 Multi-phase plan: Bourn Airfield (Site 3)

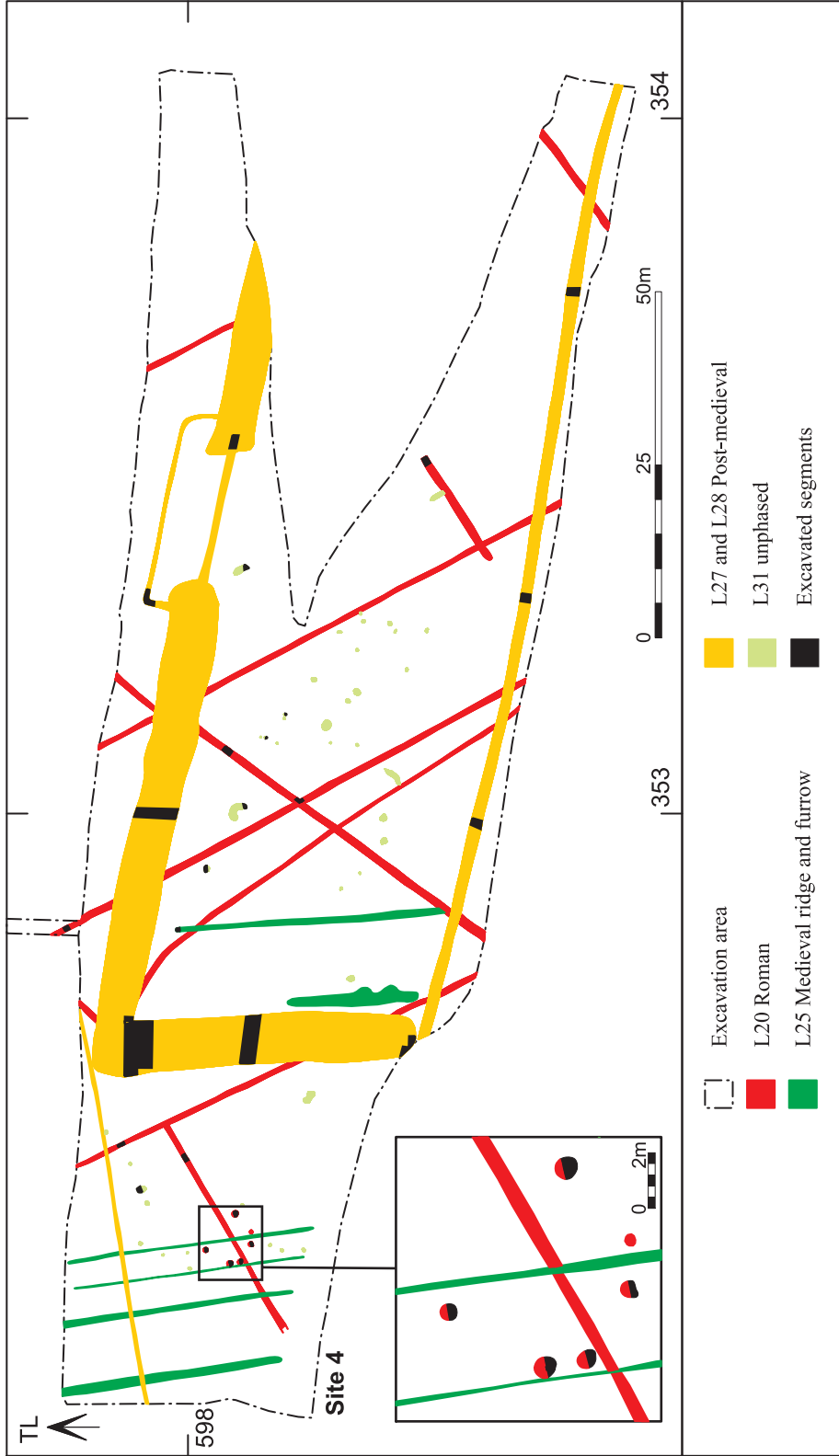


Figure 1.9 Multi-phase plan: Childerley Chapel (Site 4)



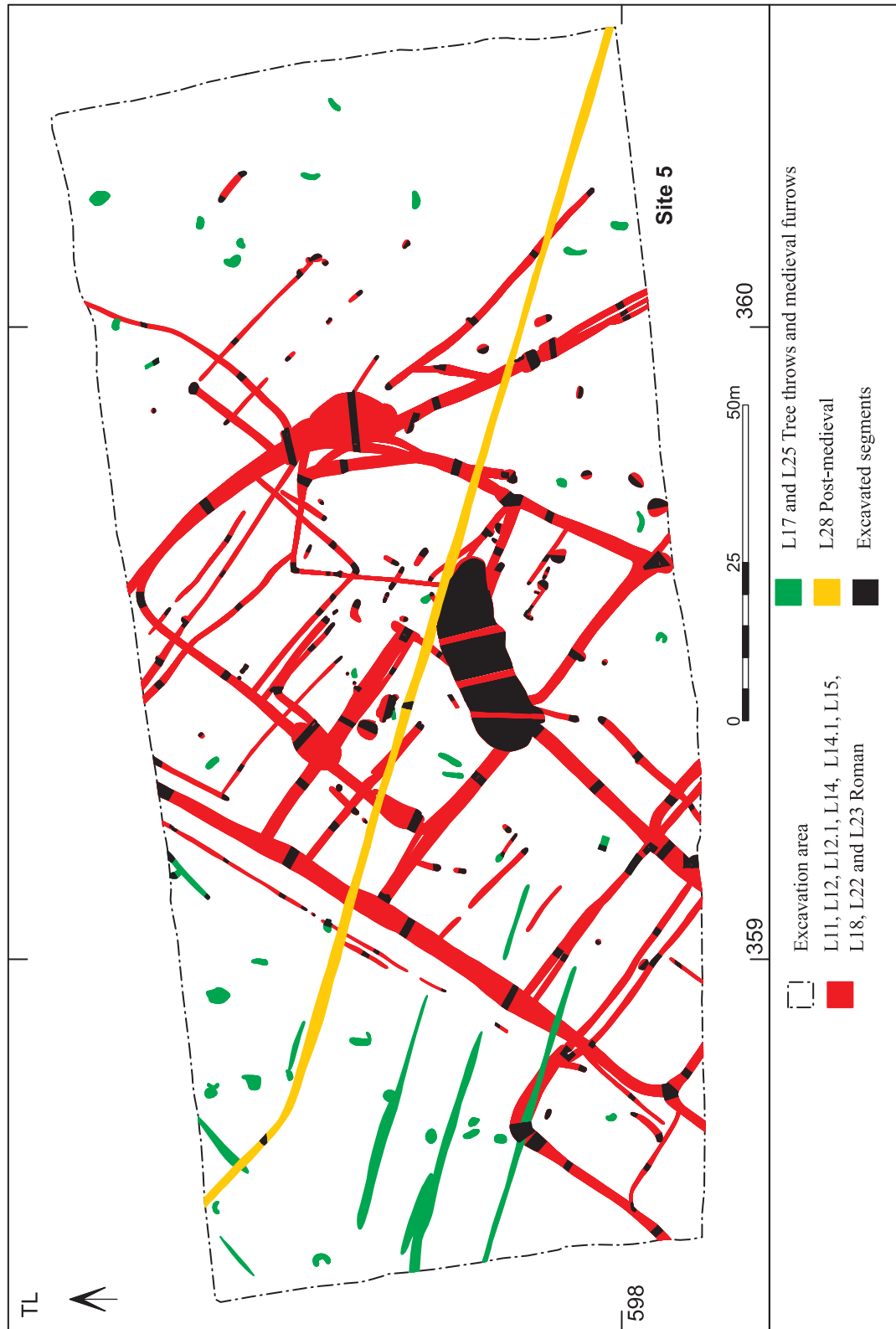


Figure 1.10 Multi-phase plan: Childerley Gate (Site 5)

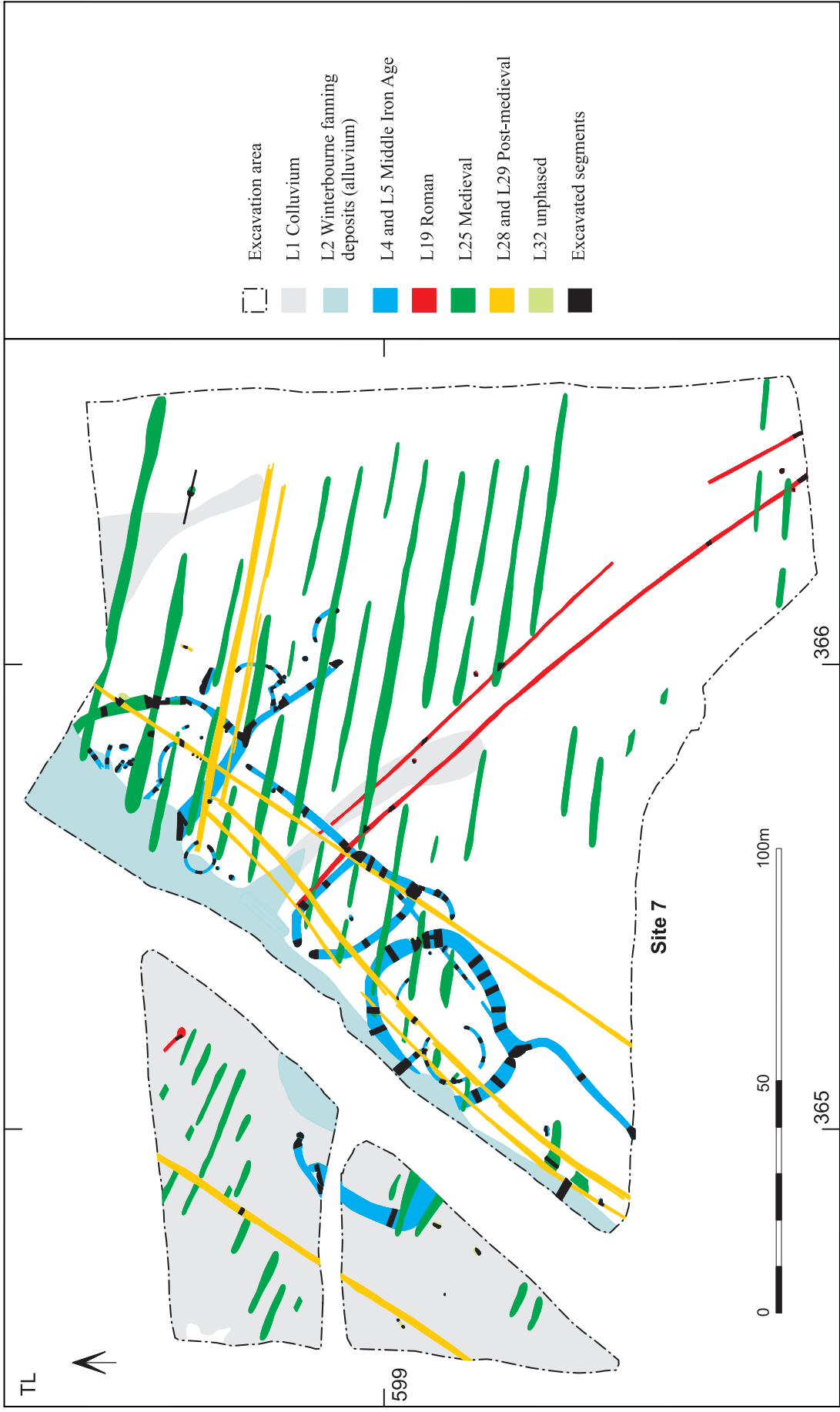


Figure 1.11 Multi-phase plan: Scotland Farm (Site 7)

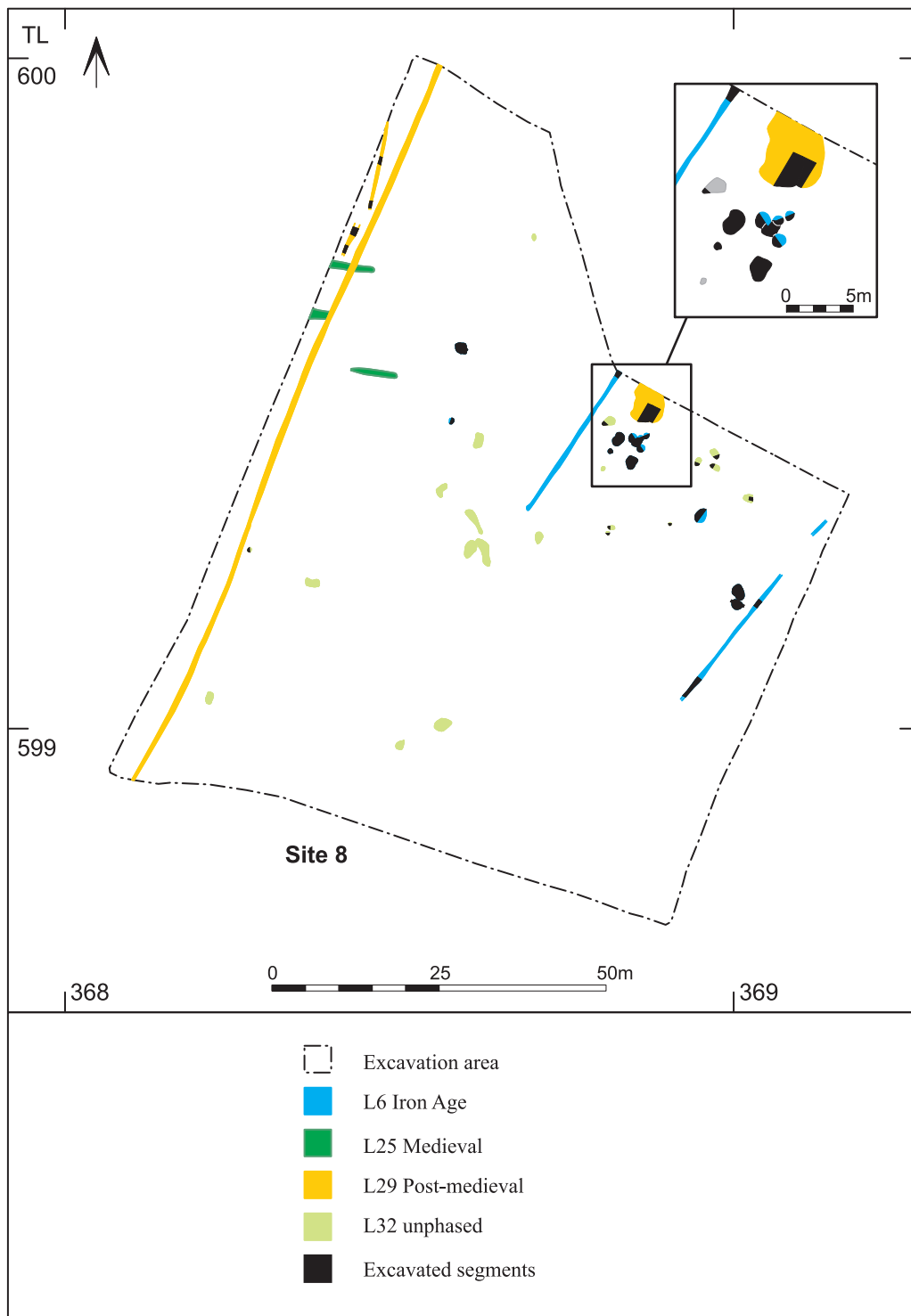


Figure 1.12 Multi-phase plan: Scotland Farm (Site 8)

### 1.6. Introduction to the archaeological results (Figs 1.6–1.14)

The title *Farming on the Edge* has both a physical and metaphorical application to the archaeological landscapes examined in this volume. The line of the A428 runs along the northern edge of the Bourn Valley, and has been a highway of varying magnitude ever since it was first used as a prehistoric ridgeway. For most of this time, the route has passed through areas of largely unenclosed pasture or scrub; the heavy clay soils and exposed location meant

that this relatively high ground was not suitable for any other use. Although excavation has revealed a number of small settlements along the route (Figs 1.6–1.14), this land has traditionally been on the margins of settlement activity, which has always focussed on the lower ground, a few miles to the north and south. The remains of Roman settlements and medieval arable cultivation on this plateau are, therefore, testament to a time when the population was living metaphorically on the edge, forced by an increase in population to plough and inhabit marginal land that would not otherwise have been considered suitable.

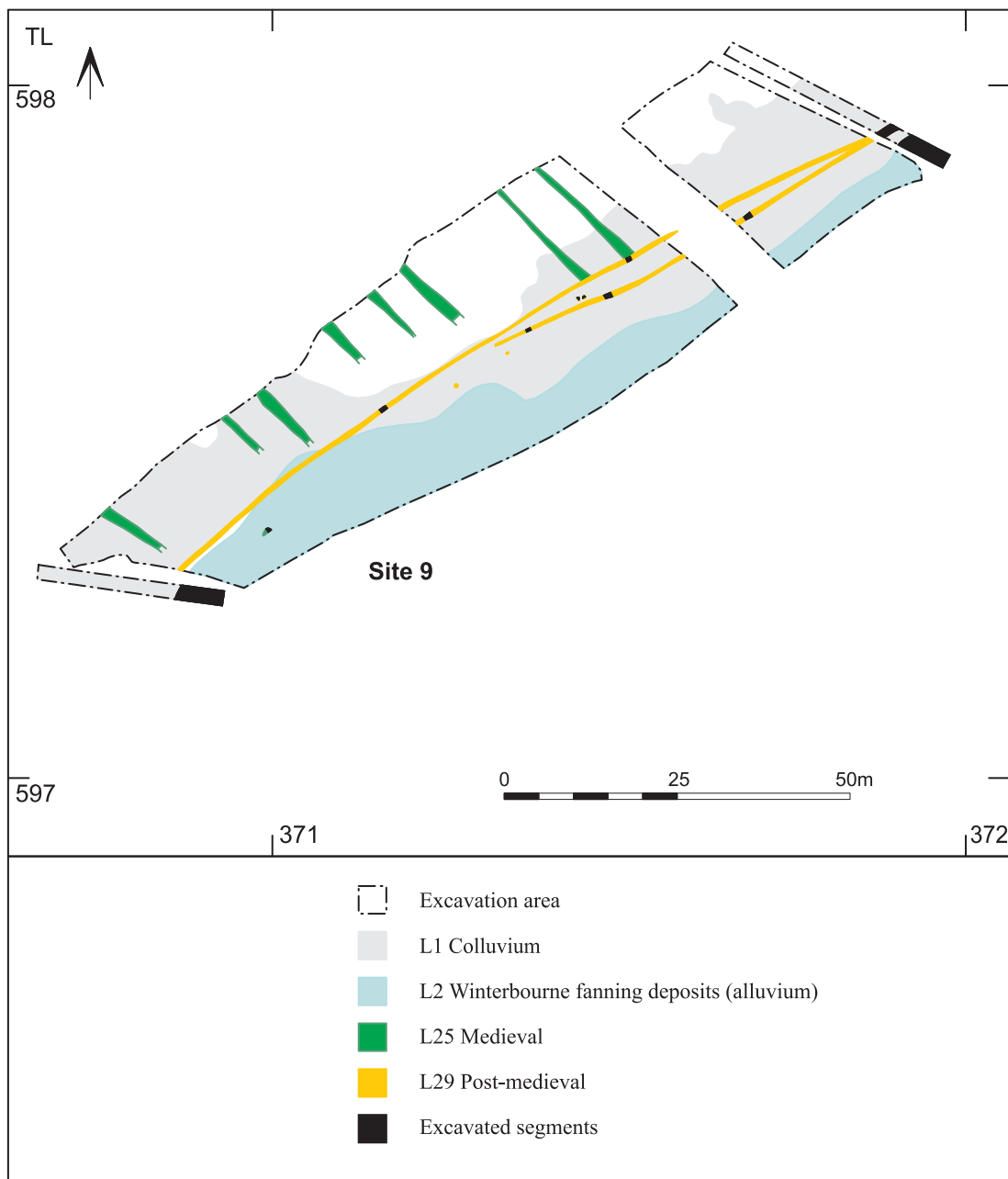


Figure 1.13 Multi-phase plan: Hardwick (Site 9)

The earliest settlement identified was, in fact, a middle Iron Age farmstead at Scotland Farm (Sites 7 and 8). It occupied a slightly less unfavourable position than the other excavated settlements—next to a winterbourne at the base of a shallow valley. The farmstead’s four enclosures were defined by large ditches, and the remains of at least four roundhouses were identified within these enclosures and their associated compounds. Chapter 2 discusses the evidence for domestic and small-scale craft activity, explores the economic basis of the farmstead, and considers whether ritual as well as practical considerations played a part in the layout and utilisation of the settlement.

Evidence for the pastoral, largely unenclosed character of the landscape can be seen from the later Iron Age and early to middle Roman remains at Ash Plantation (Site 2) and Bourn Airfield (Site 3). Excavations at these sites and at Cambourne (Wessex Archaeology 2003) have

revealed a network of drove-ways criss-crossing this area, along with livestock enclosures that were used temporarily to hold the animals that were being moved across the landscape. However, the remains of arable, ‘Celtic’-style fields were also identified at various locations between Caxton Gibbet (Site 1) and Childerley Chapel (Site 4). Chapter 3.2 considers the implications of this, and whether there is evidence for widespread restructuring of the landscape in the early Roman period.

Three Roman settlements were excavated: one at Ash Plantation, one at Bourn Airfield, and one at Childerley Gate (Site 5). The farmstead at Ash Plantation contained a roundhouse, and was in use during the 2nd and 3rd centuries; Chapter 3.4 presents the evidence for domestic occupation, and considers the role that the management of livestock played in the farmstead’s layout. The settlement at Bourn Airfield was not established until the end of the 3rd century, continuing in use throughout the 4th century.

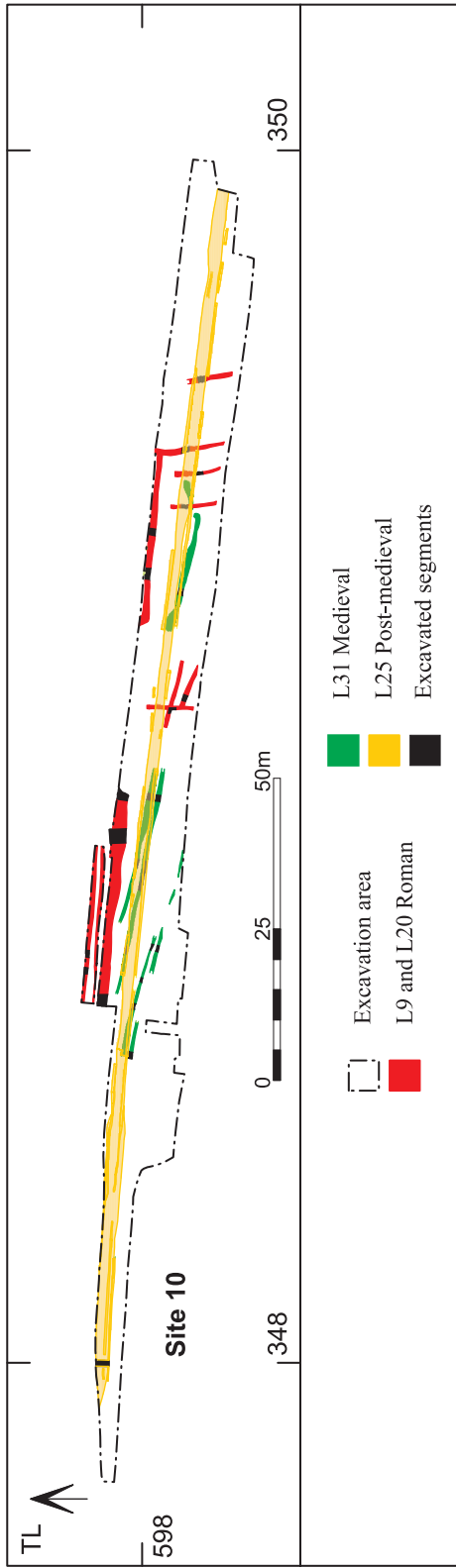


Figure 1.14 Multi-phase plan: Camford Way (Site 10)

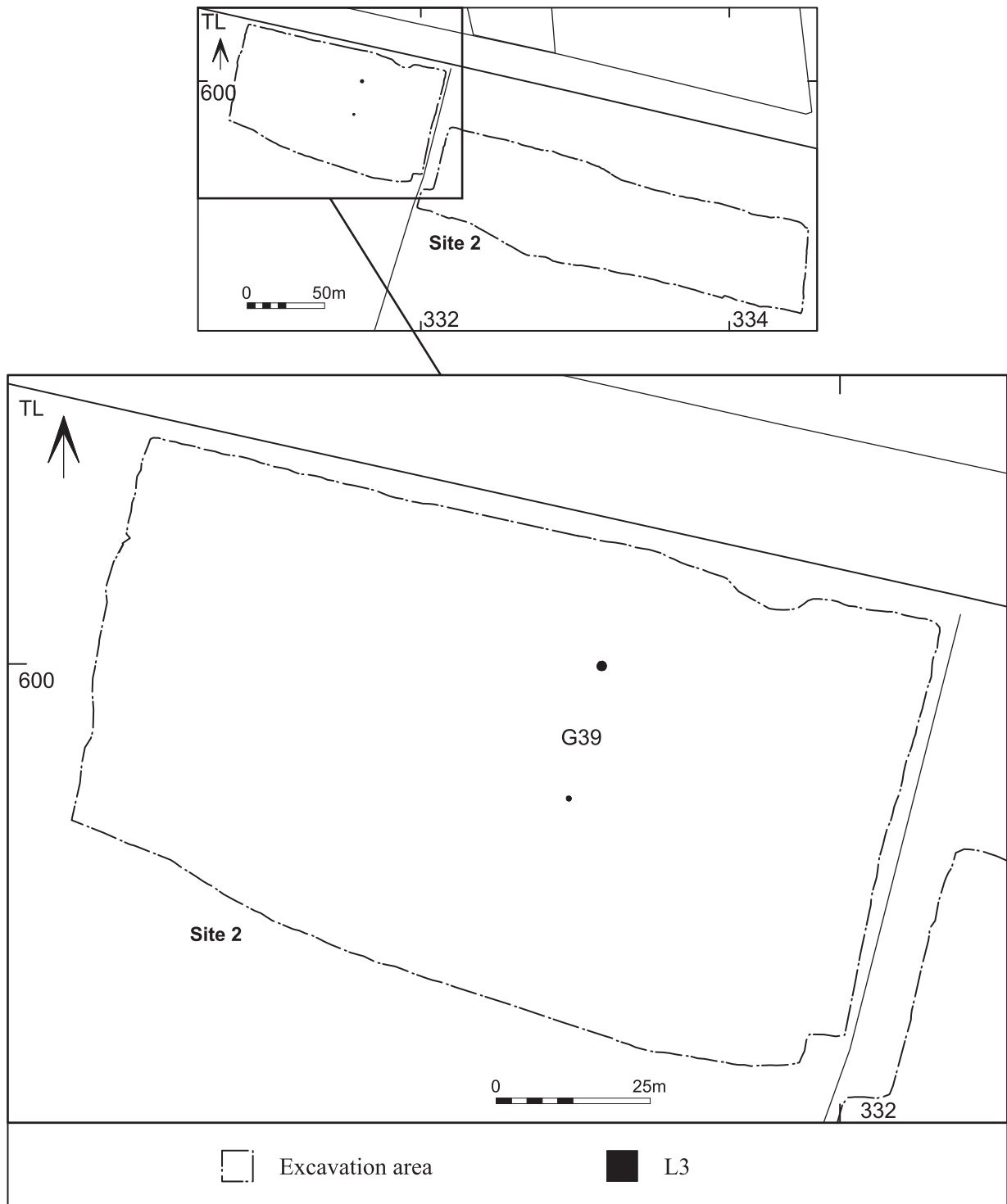


Figure 1.15 Ash Plantation (Site 2): Bronze Age pits L3

No buildings were identified but its alignment, perpendicular to the putative Roman road to the north of the site, suggests that it may have been a roadside house plot, an idea that is explored in Chapter 4.2.

The largest and most enduring of the farmsteads was at Childerley Gate. It was established in the 2nd century in the form of a ladder system, before being extended during the 3rd century and extensively remodelled at the beginning of the 4th century, around which time a coin hoard was deposited. The development of the farmstead is discussed in Chapters 3 and 4, along with the evidence for

marl quarrying, human habitation, craft activity, the farmstead's economy, the possibility that the farmstead was part of a much larger estate, and whether it may ultimately have been a veteran settlement. It is possible that the site may have continued to be inhabited in the sub-Roman period in the 5th century; the evidence for this is examined in Chapter 4.4.

Chapter 5 discusses the medieval and post-medieval remains that were excavated, in the light of work carried out in this area by landscape historians. The development and increased delineation of the route along the ridgeway

is examined, with consideration of how the expansion and contraction of its width can be tied in with fluctuations in population levels, and with historical events such as the Act of Enclosure. Finally, Chapter 6 discusses the differences and, more significantly, the similarities in how the plateau has been used from the Iron Age to the present day.

## **1.7. Pre-Iron Age archaeological background: Neolithic to Bronze Age (Phase 1)**

### **1.7.1. Early prehistoric flint artefacts**

(Fig. 1.1)

Prior to the road scheme, very little evidence existed for pre-Iron Age activity on the land along the northern edge of the Bourn Valley. A Neolithic axe (SMR02494) was found by chance *c.* 400m north-west of Caxton Gibbet (Fig. 1.1), while a circular crop-mark (NMR: OS/78132 FR.28 21 AUG 78) had been recorded as the site of a ploughed-out Bronze Age barrow. However, excavation at Childerley Gate (Site 5), where the crop-mark was located, proved its interpretation to be erroneous, with a Roman farmstead revealed instead.

The programme of evaluation and excavation recovered only fourteen pieces of worked flint, the majority of which are debitage flakes (Appendix 3.1). Eight of the flakes were found within a colluvial layer at Scotland Farm (Site 7, L1). One has a heavily nicked edge, suggesting that it has been utilised. A single flake was found within the palaeochannel / winterbourne at Hardwick (Site 9, L2). The remaining worked flint was residual within Iron Age and Roman deposits, as well as in the topsoil and subsoil (Table A6). This residual material included a pick, thought to be Mesolithic to early Neolithic in date, a Bronze Age barbed and tanged arrowhead of Green's Sutton type (Green 1980, 118–19 and fig. 45) and a possible notched flake, which was formed on a reused flake.

### **1.7.2. L3: Bronze Age pits at Ash Plantation (Site 2)**

(Fig. 1.15)

Two small, isolated pits were identified near the western end of Ash Plantation (G39, Fig. 1.15). They were the only archaeological features that produced Bronze Age pottery, although the colluvial layer on Scotland Farm (Site 7) did produce two sherds from a single vessel, perhaps a large urn (G24, Appendix 5.3.1).

Twenty-one sherds of pottery were recovered from the southern pit. They were all from the same undecorated vessel, made of a coarse fabric containing large pieces of grog. The northern pit was identified during trial trenching associated with the nearby development at Cambourne,

and produced a further thirty-seven sherds weighing 218g (Wessex Archaeology 2000, 13). This material was interpreted at the time as being early Iron Age in date, but the proximity of the two pits, and their isolation from any other dated archaeological features, suggests that a Bronze Age date may be more likely.

Ecofact samples from the southern pit produced a small quantity of charred plant remains (Appendix 15, Table A45), along with a small amount of charcoal (Appendix 16, Table A49). The plant remains comprise five cereal grains, two of which are hulled emmer or spelt wheat (*Triticum dicoccum/spelta*), four charred seeds from sedges (*Carex* spp.) and a single *Polygonum* seed. The charcoal indicates the use of oak, blackthorn, the hawthorn group, hazel and field maple.

### **1.7.3. Discussion: pre-Iron Age archaeological remains**

The nearby investigations carried out at Cambourne found a similar dearth of evidence for activity prior to the Iron Age (Wessex Archaeology 2003, 91). The presence of the Mesolithic or early Neolithic pick does suggest, however, some sporadic activity in the area at this date, which is corroborated by an early Neolithic leaf-shaped arrowhead from Lower Cambourne (Wessex Archaeology 2003, 91). With so little flint from contemporary deposits, no conclusions can be drawn as to the nature of earlier prehistoric activity in this area; there may have been occupation activity of this date along the northern edge of the Bourn Valley, although the occasional recovery of arrowheads is more suggestive of hunting within the vicinity.

The function of the Bronze Age pits is uncertain. Their limited artefact and ecofact assemblages may indicate that they were rubbish pits, perhaps associated with unenclosed, short-term or transient activity. The two sherds from Scotland Farm are considered to be an indicator of activity within the general area, rather than evidence of settled occupation during this period. The few cereal remains from the pits probably represent background processing debris, blowing around the site. Hulled wheat was the main wheat grain cultivated during most of the prehistoric period, with examples from numerous late Bronze Age and early Iron Age sites, whilst spelt wheat became the predominant hulled wheat during the Iron Age (Greig 1991, 306). Sedge is a plant that grows in generally damp or wet conditions, yet it may grow in a range of habitats, and its presence in such a small assemblage does not necessarily imply cultivation. The charcoal was almost certainly hearth debris, perhaps representing the remains of a fire at a temporary camp.

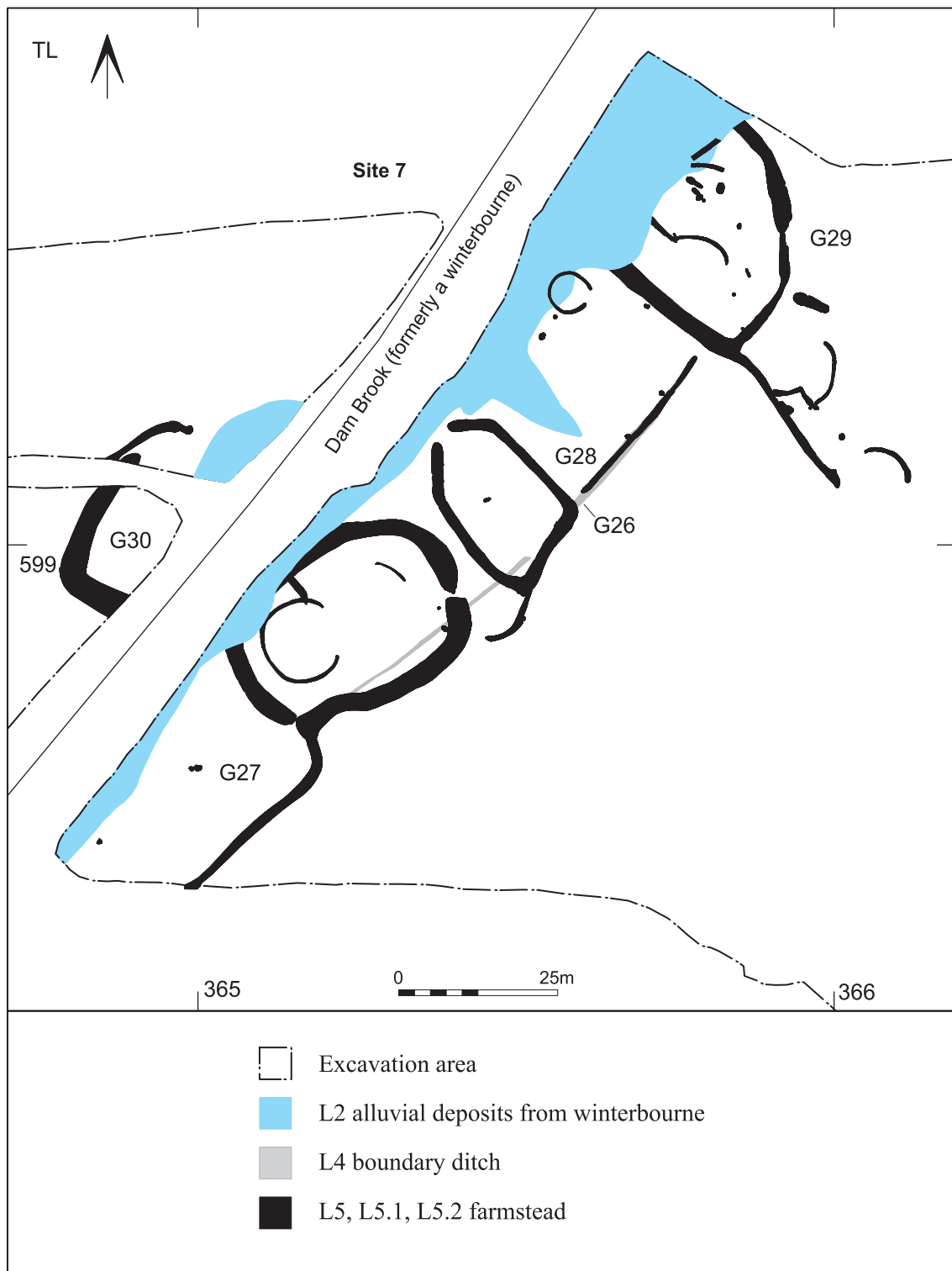


Figure 2.1 Scotland Farm (Site 7): the enclosed core G26, G27, G28, G29 and G30 of the middle Iron Age farmstead



## 2. Middle to Late Iron Age Settlement and Agriculture (c. 4th–1st Centuries BC)

### 2.1. Introduction

Historically, ‘the Iron Age of East Anglia has received less attention than other regions in southern England, especially in comparison with Wessex and the Thames Valley’ (Bryant 2000, 14). This imbalance has begun to change in recent years, primarily as a result of development-led archaeological work; yet the historical paucity of research carried out in the region must still be taken into account by any study of the Iron Age in East Anglia.

Stocker (2006, 35) notes this imbalance, and suggests that the apparent gaps in distribution maps of prehistoric sites should be treated with caution. He cites the land west of Cambridge as one such example, stating that ‘large gaps in the pattern of dots...do not necessarily represent an absence of prehistoric settlement in those places. It may just be that the clay blanket overlying the more permeable geology in such areas produces fewer crop marks.’

Occasionally the clay blanket is lifted by intensive survey or excavation, and then prehistoric archaeology is revealed — and it is plentiful’ (Stocker 2006, 35). This view is supported by the sites identified at Scotland Farm (Site 7) and Bourn Airfield (Site 3), which were unknown prior to their geophysical survey and excavation, while other Iron Age sites at Cambourne (Wessex Archaeology 2003), Caldecote Highfields (Kenney 2007) and Love’s Farm, St Neots (Mark Hinman pers. comm.) had also not been identified by aerial survey.

The nature of Iron Age remains also affects site distribution maps. The earlier Iron Age (c. 800–300BC) is largely characterised by open settlements, which are less easily identifiable in the archaeological record than the enclosed settlements that are more typical of the later Iron Age (Haselgrove *et al.* 2001, 26). Precisely differentiating earlier and later Iron Age sites is not helped by pottery dating, which is generally poor outside the Wessex and Thames Valley regions (Haselgrove *et al.* 2001, 26). In this



Figure 2.2 Aerial photograph showing Scotland Farm (Sites 7 and 8). Photograph courtesy of Philip Lane Photography

Phase	Land-use area	Middle Iron Age (5th–3rd centuries BC)	Middle–Late Iron Age (3rd–1st centuries BC)	Later Iron Age (c. 1st century BC)	Iron Age (non-specific)	Not closely datable
1	1				2	
2.1	4	8				
	5	73	67	17		1
	5.1	262	233	10	34	1
	6		215	22	85	
2.2	5.2	236	100	9	96	1

Table 3 Sherd count of Iron Age pottery from Scotland Farm (Sites 7 and 8)  
All Site 7 except L6 from Site 8

respect, it was acknowledged at the research seminar in Cambridge (Appendix A1.2) that the Iron Age pottery of Cambridgeshire is poorly understood.

Population growth in the latter half of the Iron Age saw the expansion of settlement into what was formerly marginal land, such as the Fens and areas with heavy clay soils (Haselgrove *et al.* 2001, 29). As well as more settlements, there is generally also a greater level of artefactual evidence for the later Iron Age, as the result of an increase in the trade of crafted products such as pottery, quern stones and metalwork. The trade networks were also more extensive, with continental imports and eventually direct contact with the Roman Empire broadening the range of artefacts that were available. However, the sporadic investigation of Iron Age sites, along with insecure dating evidence for many such sites in East Anglia, makes it dangerous to rely on such generalised patterns. This can be seen from the farmstead identified at Scotland Farm; its substantial ditched enclosures and its location on boulder clay are suggestive of a late Iron Age date, yet its artefactual assemblage is characteristic of an earlier site. Although our understanding of the Iron Age in East Anglia and beyond continues to grow, there is still much that is poorly understood, and the conclusions drawn in this chapter must inevitably be qualified by that consideration.

## 2.2. Middle to late Iron Age farmstead (c. 3rd–2nd centuries: Phases 2.1 – 2.2) (Figs 1.5, 2.1–2.2)

Site 7 at Scotland Farm straddles the present-day, artificially enhanced Dam Brook (Fig. 1.11). The local topography is essentially unchanged since the middle Iron Age, when a seasonally active winterbourne occupied the base of a shallow valley (see Chapter 1.5.1 and Appendix 11). An Iron Age farmstead was established within this valley (Fig. 2.1), in an area that predominantly comprised open pasture or grassland (Appendix 14.4.1). An area of marl extraction, identified on Site 8, c. 300m to the east (Figs 1.5 and 2.2), may be part of the same farmstead. The farmstead remained essentially unchanged throughout its existence; its few minor alterations were probably necessitated by occasional flooding of the winterbourne.

### 2.2.1. L4: middle Iron Age boundary ditch (Phase 2.1) (Fig. 2.1)

Boundary ditch G26 (Fig. 2.1) represents the earliest evidence of human activity at Scotland Farm (Site 7). Because of truncation by later Iron Age features and medieval ploughing, it was discontinuous and its full extent is unknown. As recorded, it was 64m long, 0.6m

wide and up to 0.2m deep. Its alignment parallel to the winterbourne suggests that the ditch was deliberately set out in relation to it. The strip of land between the winterbourne and the ditch was c. 25m wide, although the winterbourne would have varied in extent, depending on seasonal rainfall. The presence of alluvial fanning deposits within this strip of land indicates that it was subject to occasional flooding.

No other archaeological features were contemporary with ditch G26. Its infill was largely sterile, producing only a small quantity of middle Iron Age pottery (Appendix 5, Table A15), which suggests that there is unlikely to have been any nearby settlement activity.

### 2.2.2. L5–5.1: establishment and occupation of middle Iron Age farmstead (Phase 2.1) (Figs 2.1–2.2)

The core of a middle Iron Age farmstead (L5 and L5.1) was established at the bottom of the slope on Site 7, primarily occupying the strip of land previously defined in L4 (Fig. 2.1). It comprised four enclosures (G27, G28, G29 and G30), the first three of which were paired with associated compound areas. The enclosed part of the farmstead occupied a total area of c. 0.5ha. Although a large area of land to the east was excavated (Figs 2.1 and 2.2), only a small number of features were identified beyond the ditched confines of the farmstead.

The pottery assemblage suggests that the farmstead was established in the early 3rd or possibly the 4th century BC, remaining in use during the 2nd and perhaps even the early 1st century (Table 3; Appendix 5.5.2). However, the pottery that was used on the farmstead was mostly made locally. In the absence of other dating evidence, this apparent longevity may be more a reflection of the limitations of the ceramic dating, rather than the genuine lifespan of the farmstead. The majority of the pots are in sandy-quartz fabrics and, unusually for west Cambridgeshire, are mostly plain wares, with only a few examples of Scored Wares. No developed late Iron Age forms are present, and there is no obvious indication of influence from Romanised imports. The assemblage predominantly comprises small to medium jars, with some larger cooking or storage jars, and is typical of most low to medium status settlements in the region.

The animal bone assemblage from Phase 2.1 comprises a mixture of processing and consumption waste (Appendix 13.3.1). Cattle are the dominant species, with sheep or goats present in lesser numbers, including a few very young lambs or kids. Horses are also well represented, along with a few dogs and pigs, the latter probably no more than one year old. All the horses were adult animals, mostly medium pony-sized. Few had

reached an advanced age, although there is no indication that they were used for meat. Sheep were mostly culled when they were young adults, whereas the cattle tended to be kept until they were older.

The charcoal assemblage indicates that firewood was obtained mostly from oak, blackthorn and the hawthorn group, with lesser amounts from hazel, ash and field maple (Appendix 16.2.2). Blackthorn and hawthorn are both hedgerow species, and may have been used in the form of hedge trimmings; oak trees may have been present as isolated trees within the hedgerows or in small clumps of woodland. Within the molluscan assemblage (Appendix 14.4.1), snails such as *Oxychilus cellarius*, *Trichia hispida* and *Trichia striolata*, which like shady, sheltered, moist conditions, dominate the terrestrial fauna, while smaller numbers of snails such as *Pupilla muscorum* and *Vallonia excentrica*, which are generally associated with drier, more open situations, are also present.

The assemblage of charred plant remains recovered from the farmstead's core area is small (Appendix 15.3.2), even though forty-four samples were taken, covering all the significant Iron Age ditches and pits. Following

assessment (Albion Archaeology 2006, Appendix 20), twenty of the more promising samples were analysed. This produced a fairly even distribution of cereal remains, with no particularly high concentrations and a very low item density of no more than two per litre of processed soil. Many of the grains could not be identified, and there are also a number of unquantified cereal fragments that are smaller than 2mm. Unless plant remains were not becoming incorporated into the infill of the ditches and pits, then the poverty of the charred plant assemblage must be ascribed to poor preservation.

The identified grains comprise barley (*Hordeum* spp.), including hulled grains (*Hordeum vulgare*), and hulled wheats, with one definite grain of spelt (*Triticum spelta*). Two wheat glume bases provide evidence for the presence of emmer and/or spelt (*T. dicoccum/spelta*). A small number of charred weed seeds were also identified, including goosefoots (*Chenopodium* spp.), dock (*Rumex* sp.), bromes (*Bromus* spp.), bedstraw (*Galium* sp.), buttercups (*Ranunculus* spp.), medick/clover (*Medicago/Trifolium* sp.), blackberry/raspberry (*Rubus fruticosus/idaeus*) and several small, indeterminate grass seeds. These seeds may be from arable weeds incidentally

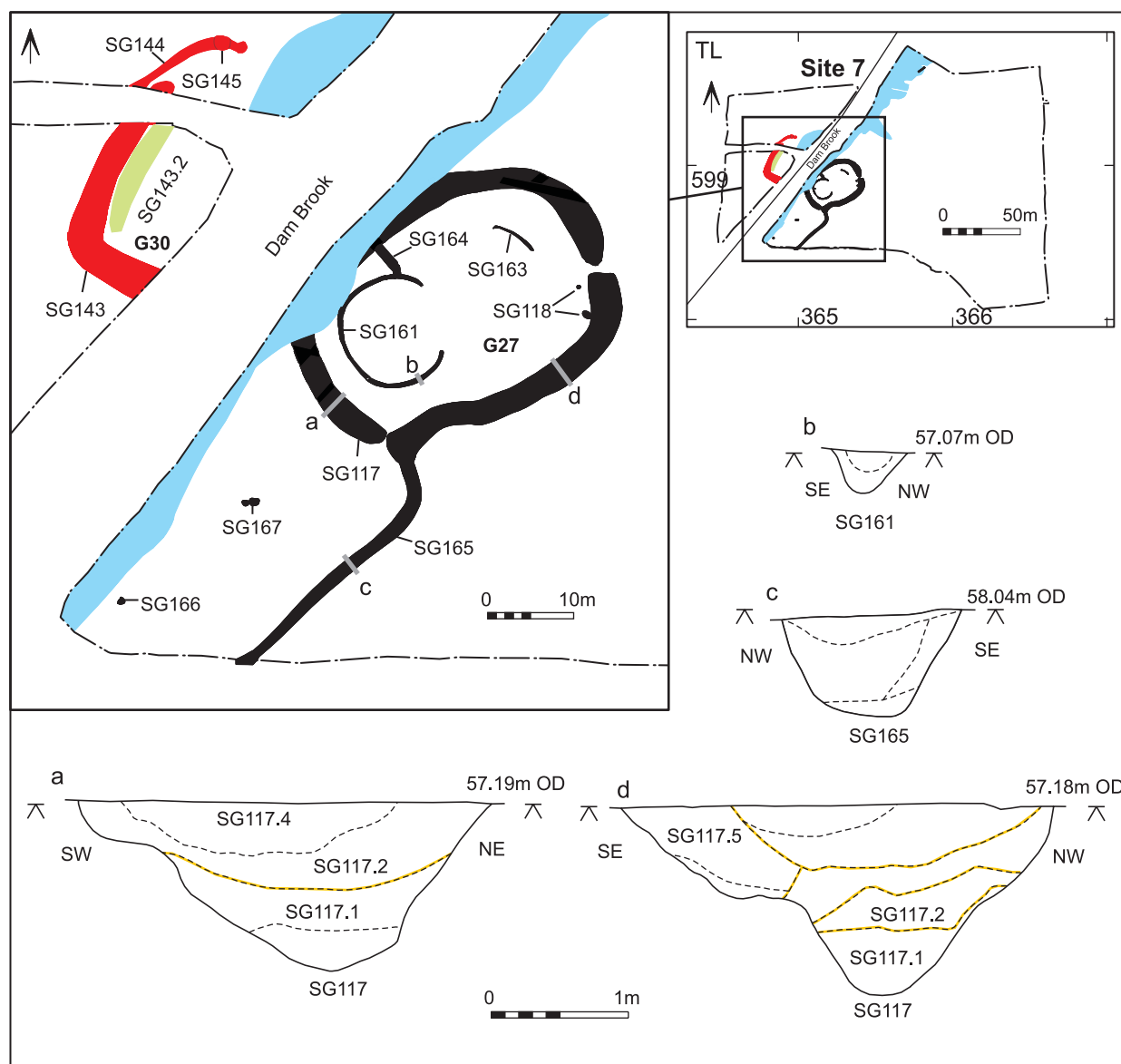


Figure 2.3 Scotland Farm (Site 7): southern enclosure and compound G27 and western enclosure G30



Figure 2.4 Scotland Farm (Site 7): southern enclosure G27, looking south-east. Photograph courtesy of Aerial Close-Up Ltd

harvested with the cereal grains, with the exception of the blackberry/raspberry seed, which is indicative of a scrub or hedgerow plant community and possibly represents the burnt by-product of collected and consumed fruit.

#### *Southern enclosure and compound G27* (Figs 2.1, 2.3–2.4)

The southern enclosure was sub-oval in shape, defining an area of 610m<sup>2</sup> (Figs 2.3 and 2.4). It could be entered from either the north-east or the south, across narrow causeways that were no more than 0.9m wide. The southern entrance led into the adjoining compound, which was at least 690m<sup>2</sup> in size, while the eastern one gave access to a narrow strip of land between this enclosure and the middle one (Fig. 2.1). The enclosure was defined by ditch SG117, which was up to 3.6m wide and 1.5m deep (Fig. 2.3, a, d). Its associated compound was defined by SG165, which was c. 1.4m wide and c. 0.75m deep (Fig. 2.3, c).

The presence and morphology of lighter-coloured deposits within the upper half of the enclosure ditch indicate that there was an external bank on the south-eastern side of the enclosure (Fig. 2.4). There were no comparable deposits elsewhere within the ditch, and it seems unlikely that there was a bank elsewhere along the perimeter.

Within the enclosure were the remains of a heavily truncated eaves drip gully for a roughly east-facing roundhouse (SG161). Its exact orientation is unknown due to the high level of plough truncation. The internal diameter of the eaves drip gully was 12m, suggesting the building would have been 10–11m in diameter. A further short arc of heavily truncated gully SG163 also survived;

this may have been a second roundhouse, or a less substantial structure such as a windbreak. A piece of fired clay with a wattle impression presumably derived from one of these two structures.

The north-western edge of roundhouse SG161 featured a small, NW–SE aligned drainage gully SG164, which would have taken excess rainwater from the eaves drip gully into the enclosure ditch (Fig. 2.3). A similar system of drainage gullies was used at the Iron Age settlement at Draughton, Northants, also situated on impermeable boulder clay (Grimes 1961, 22–23). This arrangement suggests that rainwater management was at least an occasional problem. Geoarchaeological analysis of the deposits in the enclosure ditch (Appendix 11) and the presence of the freshwater dwarf pond snail *Lymnaea truncatula* (Appendix 14.4.1) attest to pools of standing water for at least part of the year.

The only other features within the southern enclosure and its associated compound were three small pits in each. The absence of any hearths, floor surfaces or post-holes within the roundhouse suggests that this small number of features is almost certainly the result of plough truncation. Two pits (SG118) near the north-eastern entrance to the enclosure may have been badly truncated storage pits. Pits SG167 within the compound had steep profiles, flat bases and clay linings. Clay-lined pits of a similar date were found at Twywell, Northants, where it has been suggested that they were used for dyeing wool (Jackson 1975, 61; 66).

The artefacts recovered from the southern enclosure and compound are characteristic of a domestic assemblage, and include 4.2kg of Iron Age pottery (Table A15). A relatively large but poorly preserved assemblage

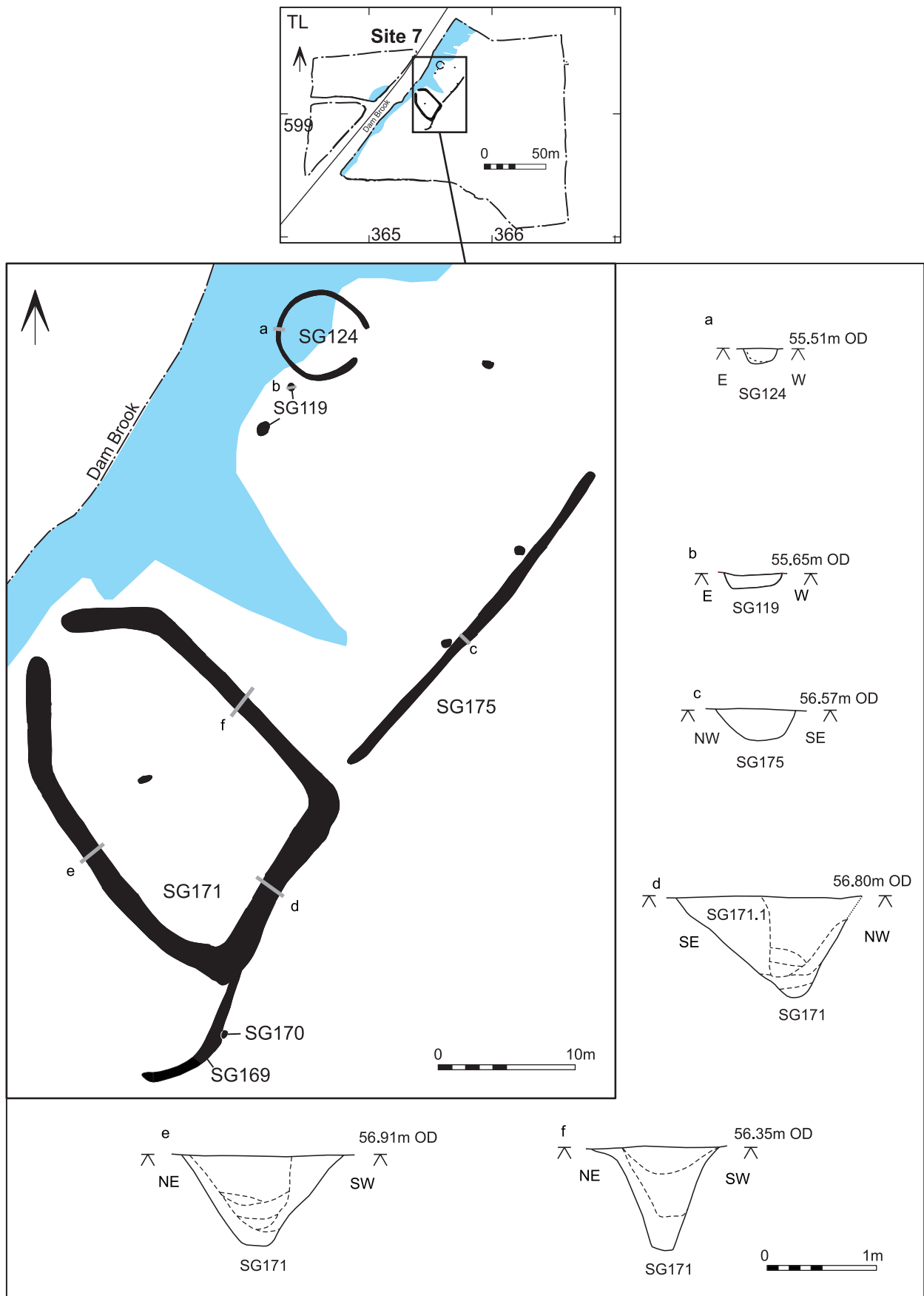


Figure 2.5 Scotland Farm (Site 7): middle enclosure and compound G28

of animal bones was also recovered, in which cattle predominate, although sheep or goats are represented in significant numbers. A small quantity of horse bone is also present. Part of an adult human femur was recovered from deposit SG117.2 within the enclosure ditch (Appendix 12.3.1).

Craft activity is evidenced by the presence of two chalk spindle whorls or weights (Appendix 3.2.1; Fig. A42, OA1 and OA2) within the southern ditch terminal of the north-east entrance to the enclosure. Part of a ceramic loomweight also came from the infill of the enclosure ditch, suggesting that cloth was being manufactured on site. The recovery of nearly 2kg of fuel ash slag from the ditch suggests the presence of hearths within the enclosure, whilst a smaller but still significant assemblage of fuel ash slag and fired clay or hearth lining was recovered from the two clay-lined pits SG167. Overall, the southern enclosure produced the majority of the 1.2kg assemblage of fired clay from the farmstead (Appendix 9.3).

#### *Middle enclosure and compound G28*

(Figs 2.1, 2.5–2.6)

The middle enclosure SG171 defined an area of *c.* 280m<sup>2</sup> (Fig. 2.5). It was bordered to the north-east by an associated compound SG175 and to the north-west by the winterbourne. To the south-west, a ‘corridor’ separated this enclosure from the southern one (Fig. 2.1). The north-western end of the enclosure funnelled into a 2.8m-wide entrance, *c.* 10m from the winterbourne. Turning left out of this entrance gave access to the

‘corridor’ between the middle and southern enclosures; the open land to the east of the farmstead could then be reached through a 2.5m wide entrance formed by ditch SG169. Turning right out of the enclosure’s entrance gave access to the adjacent compound, which occupied an area of at least 780m<sup>2</sup>.

The enclosure ditch was up to 2.1m wide and 1.35m deep (Fig. 2.5, d–f). The pattern of silting within the ditch suggests that the enclosure had a substantial external bank on its south-eastern side (Fig. 2.6). The evidence for the other sides is less conclusive, but they may have had less substantial external banks. The ditch defining the south-eastern side of the compound was much smaller, only 0.8m wide and 0.3m deep (Fig. 2.5, c). The 2m-wide gaps at each end might represent entrances to the compound. However, it is perhaps more likely that they mark the position of external banks for the adjacent enclosures, the middle one in particular. Only a single small pit was identified within the enclosure; again, it is possible that this is the result of plough truncation rather than reflecting the original density of features.

Roundhouse SG124 and two small pits in the north-eastern corner of the compound (SG119) represent a more tangible focus of activity. Three further pits were identified along the inner edge of the compound. The complete eaves drip gully of the east-facing roundhouse survived (Fig. 2.5, a); with an internal diameter of just 6m, the gully was associated with a much smaller building than was present in the southern enclosure. It does appear, however, that the roundhouse was capable of being secured; an iron object, from the southern terminal of the



Figure 2.6 Scotland Farm (Site 7): middle enclosure ditch SG171 at its south-eastern end, looking west. Scale 1m

eaves drip gully, may be a possible hasp or bracket for a sliding bolt (Appendix 3.2.1; Fig. A42, OA3).

The artefacts recovered from features in G28 include 1.4kg of Iron Age pottery. Two thirds of this came from the enclosure ditch, concentrated at its two eastern corners and the northern terminal; the segments excavated along the sides of the enclosure (Fig. 1.11) produced much less pottery. Most of the remainder came from the eaves drip gully of roundhouse SG124 and the two nearby pits (Table A15).

The enclosure ditch produced 2.58kg of animal bone, 1.25kg of which came from the northern terminal. Compared to the southern enclosure G27, cattle shows a greater dominance over sheep or goats, while horse bones constitute a more significant part of the assemblage (Appendix 13.2.1). Similarly, a comparatively small quantity of fuel ash was recovered, suggesting that either this enclosure and compound were less intensively occupied, or that they were non-domestic in nature (Appendix 3.2.1). The smaller size of roundhouse SG124, compared to SG161 in the southern enclosure, supports this suggestion.

#### *Northern enclosure and compound G29*

(Figs 2.7–2.8)

The northern enclosure covered an area of at least 530m<sup>2</sup>. Its eastern entrance gave access to an adjoining compound (Fig. 2.7). Of the farmstead's four enclosures, only this one showed evidence for changes in layout: its ditch was re-cut twice, each time with a corresponding change in either the position or width of the entrance. As part of L5, the enclosure was initially defined by ditch SG121, which was considerably smaller than the southern and middle enclosure ditches — only 0.8m wide and 0.4m deep. Post-hole SG127 in the middle of its entrance is suggestive of a gated access. The first re-cut of the ditch in L5.1 (SG125 and SG146) shifted the entrance further south. SG125 was comparable in size to the farmstead's other enclosure ditches, although it was considerably smaller towards the entrance. The second re-definition of the northern enclosure is described below (Chapter 2.2.4).

Unlike its southern and middle counterparts, the northern compound appears to have been unenclosed, although its south-western side was defined by ditch SG123. It is possible that a wattle fence or a hedgerow defined the other sides, although no archaeological evidence was found to support this. At 1.2m wide and 0.5m deep, the ditch was midway in size between the ditches defining the southern and middle compounds (Fig. 2.8, g).

The northern enclosure contained a short arc of eaves drip gully, representing roundhouse SG126. Isolated post-holes and a length of beam slot (SG128–130) represent the possible remains of other, more heavily truncated structures. The roundhouse was roughly the same size as SG161 in the southern enclosure, and probably also faced east. Like SG161, it featured a drainage gully SG134 (re-cut twice), which served to take excess water from the eaves drip gully into the enclosure ditch. A short length of the eaves drip gully itself had also been deepened to act as a sump, similar to those used at the riverside settlement at Farmoor, Oxon. (Lambrick and Robinson 1979, 21–3). If excessive groundwater was a particular concern within this enclosure, it may explain

the need to re-cut the enclosure ditch and relocate the entrance.

A number of small pits were located to the north of roundhouse SG126 (Fig. 2.7). Within cluster SG131, the pits were partially intercutting, indicating that they were not all contemporary. SG132 was a 'beehive' pit, with undercutting sides and a flat base (Fig. 2.8, a); such pits may have been designed for optimal grain storage (Hill 1995, 18). Two more intercutting pits were located in the compound, near the entrance to the enclosure (Fig. 2.8, f). At 4.15m long, 1.55m wide and 0.77m deep, the larger pit SG136 was roughly twice the size of its partner. A number of other pits were located in the compound: SG138; SG137, which was cut by the boundary ditch SG123 (Fig. 2.8, g); and SG122 and SG150 which cut the ditch.

The compound contained a second roundhouse SG142 at the south-eastern end of ditch SG123. It was slightly smaller than roundhouse SG126 in the enclosure and had suffered a similar degree of truncation (Fig. 2.8, h). Its entrance may have faced south-east rather than east. Three more short arcs of gully near the south-western side of the compound are less likely to have been associated with roundhouses. SG140 (Fig. 2.8, d) was similar to SG126; it even featured a short section that had been deepened to act as a sump. However, it appears to have been contemporary with, and possibly part of, an L-shaped arrangement of structural slots (SG139), each 4.6m long (Fig. 2.8, e). They may have been designed to hold wattle fences, combining with ditch SG123 to form a small enclosed area of c. 15m<sup>2</sup>, to which post-hole SG141 may have provided gated access. SG140 perhaps served partly to enclose and partly to drain the area to the north of SG139. A significant concentration of artefacts was recovered from the vicinity of SG139. Pit SG150 produced 1.56kg of pottery, including three large jars or storage vessels (Fig. A46, <P20>), while moderate amounts of pottery and animal bone were recovered from SG139 themselves. Two fragments of saddle quern came from nearby pit SG138 and from ditch SG123 (Appendix 4.2, Table A10).

As seen in G27 and G28, the animal bone assemblage from the northern enclosure and compound shows a numerical predominance of cattle over sheep or goats. Like the middle enclosure and compound, it also includes a significant number of horse bones (Appendix 13, Table A39).

#### *Western enclosure G30*

(Figs 2.1, 2.3)

The western enclosure covered an area of at least 260m<sup>2</sup> (Fig. 2.3), defined by ditch SG143 which was comparable in size to the ditches of the southern, middle and re-cut northern enclosures (Fig. 2.1). Evidence for an internal bank SG143.2 was visible both in section and in plan; overlying colluvial and alluvial deposits appear to have protected it from the plough damage which affected more exposed parts of the farmstead. The north-eastern side of the enclosure appears to have been left open as an entrance, defined by a smaller ditch SG144. Pit SG145 was subsequently dug into this ditch. Unlike its three counterparts to the east of the winterbourne, enclosure G30 had no adjoining compound.

Little occupation debris was recovered from the enclosure, which produced just fourteen sherds of Iron Age pottery (Appendix 5, Table A15) and one fragment of cattle bone (Appendix 13, Table A39). Even allowing for

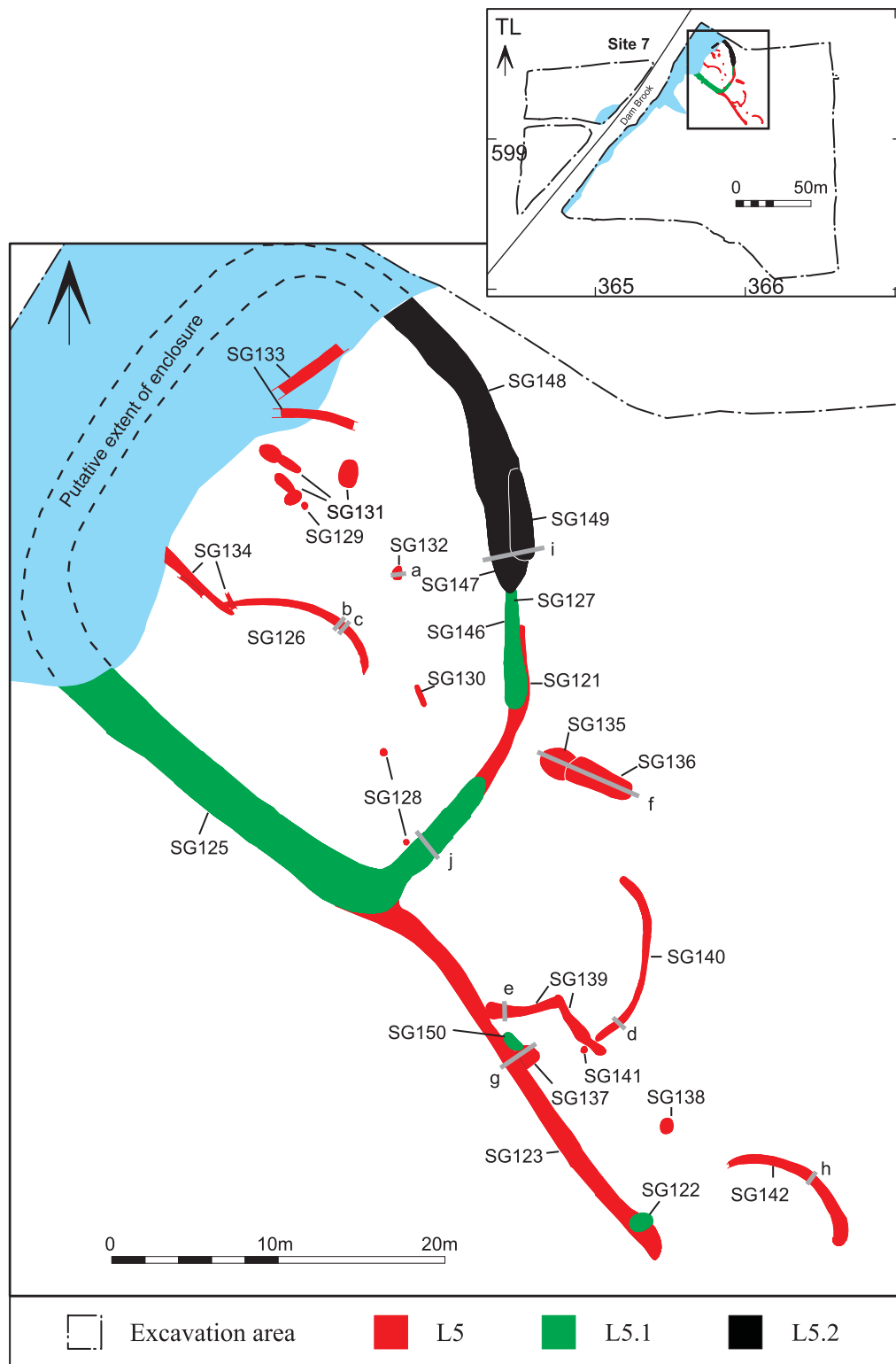


Figure 2.7 Scotland Farm (Site 7): northern enclosure and compound G29

the fact that this enclosure was excavated less intensively than the other three, the density of artefacts recovered is significantly lower than that from the southern and northern enclosures, suggesting a non-domestic function.

### 2.2.3. L6: quarry pits and enclosure (Phase 2.1)

(Figs 1.5, 2.9–2.10)

A concentration of fifteen quarry pits was revealed at Scotland Farm (Site 8), c. 300m east of the farmstead's

core on Site 7 (Fig. 1.5). All had been dug into an outcrop of degraded chalk marl. The largest pit SG248 was 1.9m long, 1.55m wide and 0.5m deep (Figs 2.9, a and 2.10). Thirteen of the pits were bounded by two ditches SG253, which are thought to represent the heavily truncated remains of an enclosure. Their spatial relationship with the pits, along with two sherds of middle Iron Age pottery recovered from their fills, suggests that the two sets of features are broadly contemporary.



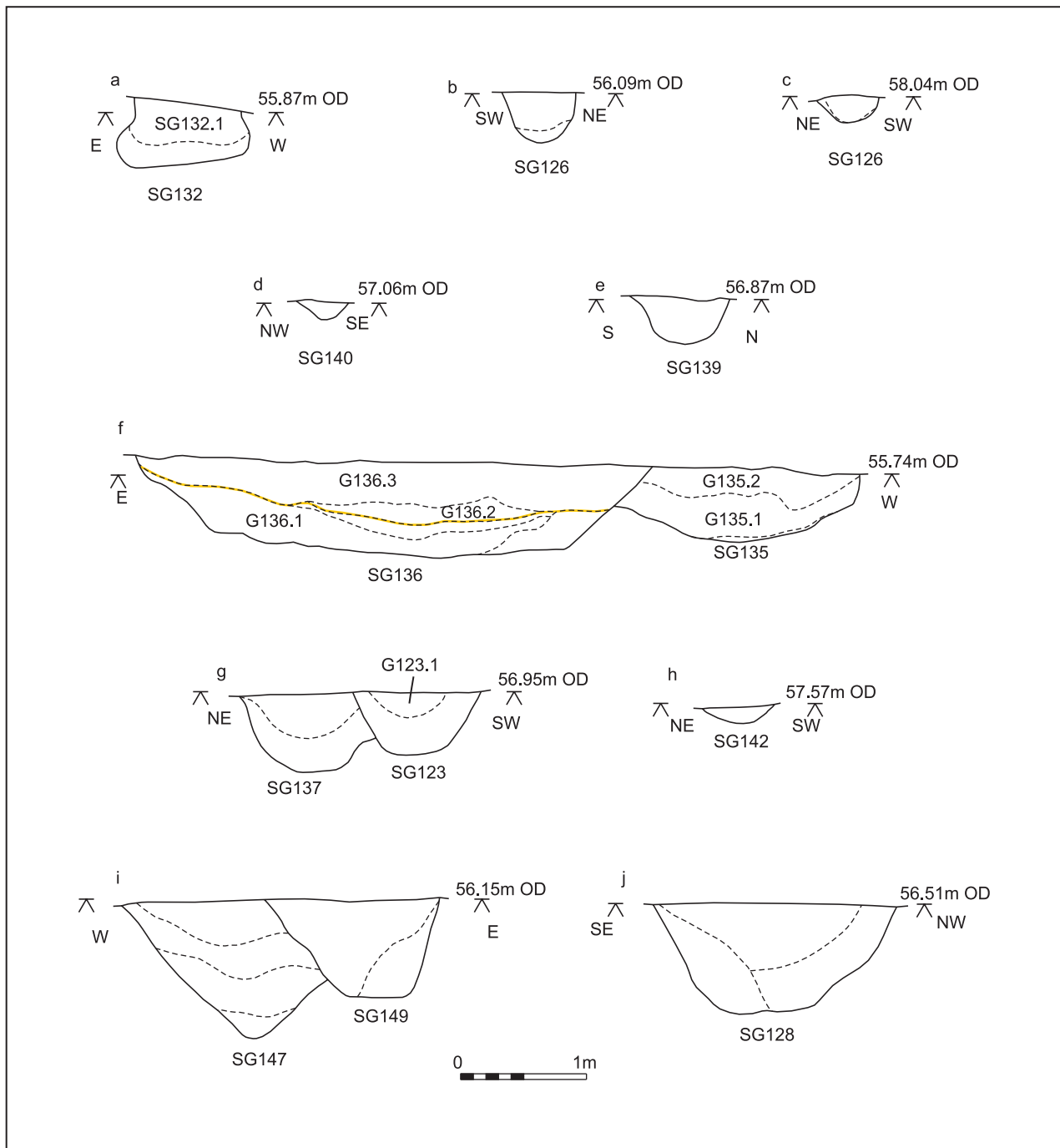


Figure 2.8 Selected section drawings to accompany Figure 2.7

A total of 322 sherds of pottery, weighing *c.* 2.8kg, was recovered from Site 8, with an average sherd weight of less than 9g. This relatively low average sherd weight may be a result of the quarry pits having been backfilled with rubbish collected from elsewhere, with no settlement activity in the immediate vicinity. It is also interesting that this assemblage does not contain any of the earliest fabrics (5th–3rd centuries BC) which were present on Site 7, the farmstead’s core (Table 3). This suggests that the activity represented by the quarry pits and enclosure at Site 8 began some time after the foundation of the farmstead.

The pits also contained a whetstone, a fragment of saddle quern, an iron nail shank and 200g of fired clay

fragments (Appendices 3.2.2 and 9.3). Only a small assemblage of animal bone was recovered, which, in contrast to Site 7, is largely composed of sheep or goats (Appendix 13, Tables A38 and A39). There is no clear difference in the relative condition of the bone from the two sites to explain this contrast. It may reflect either disposal or dietary differences, or may simply be a function of the much smaller size of the Site 8 assemblage. The molluscan assemblage (Appendix 14) recovered from the pits is also small; it suggests moist, sheltered conditions, though the presence of *Vallonia excentrica* is suggestive of short-cropped, open grassland (Cameron and Redfern 1976, 34).

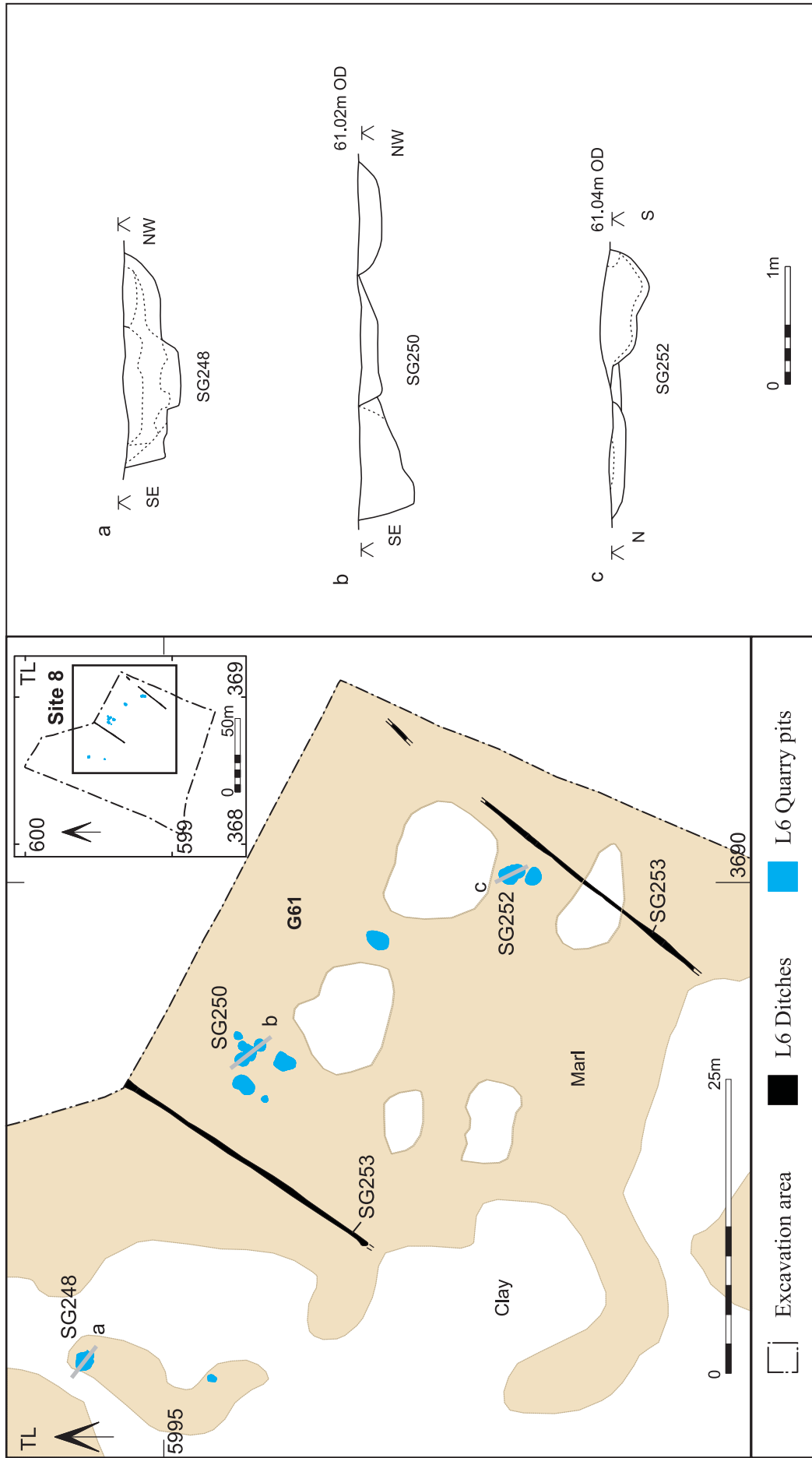


Figure 2.9 Scotland Farm (Site 8): quarry pits G61 and associated ditches

#### 2.2.4. L5.2: final occupation and abandonment of middle Iron Age farmstead (Phase 2.2)

(Figs 2.1, 2.3, 2.7–2.8)

The final phase of the farmstead (L5.2) is represented by the upper deposits within the features of G27, G28 and G29 (Fig. 2.1). The southern and middle enclosures were gradually abandoned — deposit SG117.5 within the southern enclosure ditch represents weathering of the external bank (Fig. 2.3, d), while there is no indication that any of the other deposits in the southern and middle enclosure ditches were deliberately backfilled — yet occupation continued within the northern enclosure and its compound (G29), focussed around the entrance between the two. The northern enclosure was once more re-defined (Fig. 2.7), with the northern side of its enclosure ditch again re-cut (SG147/SG148). At *c.* 2.2m wide and 0.95m deep, this re-cut completely truncated the original enclosure ditch; it was also much larger than the first re-cut. Its terminal SG149 was subsequently re-cut, forming either a sump or perhaps a pond (Fig. 2.8, i).

The focus of activity around the entrance to the northern enclosure is illustrated by the quantity of artefacts recovered from this area. Pit SG136 produced 514g of pottery from the upper half of its infill, with a further 846g coming from the northern terminal SG147 of the enclosure ditch (Appendix 5, Table A16). In addition, these two features also produced significant quantities of animal bone: the pit contained fragments from two medium-sized adult dogs and a skull and two pelves from a mastiff-sized adult individual (Appendix 13, Table A39). Two fragments of saddle quern were also recovered from enclosure ditch SG146 and its re-cut SG148. These two fragments, along with the two from Phase 2.1 deposits in the northern compound (Chapter 2.2.2) and one from L6 on Site 8 (Chapter 2.2.3), were made from non-local stone. Three of the fragments are sandstone, including one of possible Millstone Grit from the Midlands (*i.e.* Derbyshire, Cheshire or Shropshire). The other two fragments are basaltic in nature; possible sources include south-west England, south-west or north-west Wales, the Lake District and Scotland.

The average sherd weight of the recovered pottery from Phase 2.2 is much lower than that from the lower fills, dropping from 14.49g to 8.14g in the case of the southern enclosure ditch (Appendix 5, Table A16). This may suggest that, during periodic cleaning out of the ditches, the lower fills were left undisturbed. However, given the absence of evidence for re-cutting (with the exception of the northern enclosure), it may simply indicate that sherds within the abandoned farmstead were being broken down and carried into the infilling ditches by weathering and erosion.

#### 2.2.5. Discussion: middle Iron Age farmstead at Scotland Farm

##### *Location and surrounding environment*

(Figs 2.1, 2.11)

One of the more striking aspects of the farmstead is its integrated layout (Fig. 2.1), suggesting that the enclosures and compounds (those to the east of the winterbourne, at least) were all established in a single event. Many middle Iron Age settlements, such as the nearby one at Knapwell Plantation (Wessex Archaeology 2003, 40–52), exhibit signs of more ‘organic’ growth. However, at Scotland



Figure 2.10 Scotland Farm (Site 8): quarry pit SG248 during excavation. Scale 1m

Farm, only minor alterations to the layout were made, even in the northern enclosure, with no real impact on the integrity of adjacent enclosures.

The builders of the farmstead appear to have deliberately selected the low-lying strip of land on the eastern side of the winterbourne for the row of enclosures G27, G28 and G29. Also parallel to the winterbourne was boundary ditch L4, stratigraphically the earliest feature on Site 7, and delineating the block of land occupied by the enclosures. The exact purpose of the earlier boundary ditch is unclear — it may have been to keep animals out of a prime area of meadow next to the winterbourne, or it may have had a more ritualistic function (see below). However, it is clear that this strip of land had already been marked out as ‘special’ prior to the construction of the enclosed farmstead.

The farmstead’s situation, on low-lying land adjacent to a seasonally active winterbourne, is intriguing. Middle Iron Age settlements on streams or rivers are not unknown, *e.g.* Farmoor (Lambrick and Robison 1979) and Langley Mill, Birmingham (Pete Fasham pers. comm.), but they are something of a rarity. They can be seasonal, with the inhabitants moving to higher ground during the winter. In this respect, it is important to emphasise that the winterbourne was not a permanent stream or river. It occupied a piece of low-lying land, running off a natural watershed (the northern ridge of the Bourn Valley), and would only have been active after heavy rain. There is no evidence to suggest that the enclosures at Scotland Farm were only used on a seasonal basis; indeed, the construction of drainage channels in the northern and southern enclosures indicates that the inhabitants had to contend with excessive groundwater, a problem which would largely have been confined to the winter months.

The construction of drainage channels, the creation of sumps within some of the eaves drip gullies, and the presence of alluvial fanning deposits on the margins of the farmstead all suggest that surface water was a problem for the inhabitants. However, as long as drainage and water management were part of the farmstead’s design, this was probably an acceptable inconvenience, given the advantages of the site. It appears that the measures taken to alleviate problems with surface water were largely successful, since it is unlikely that ‘beehive’ storage pit SG132 would have been constructed in the northern

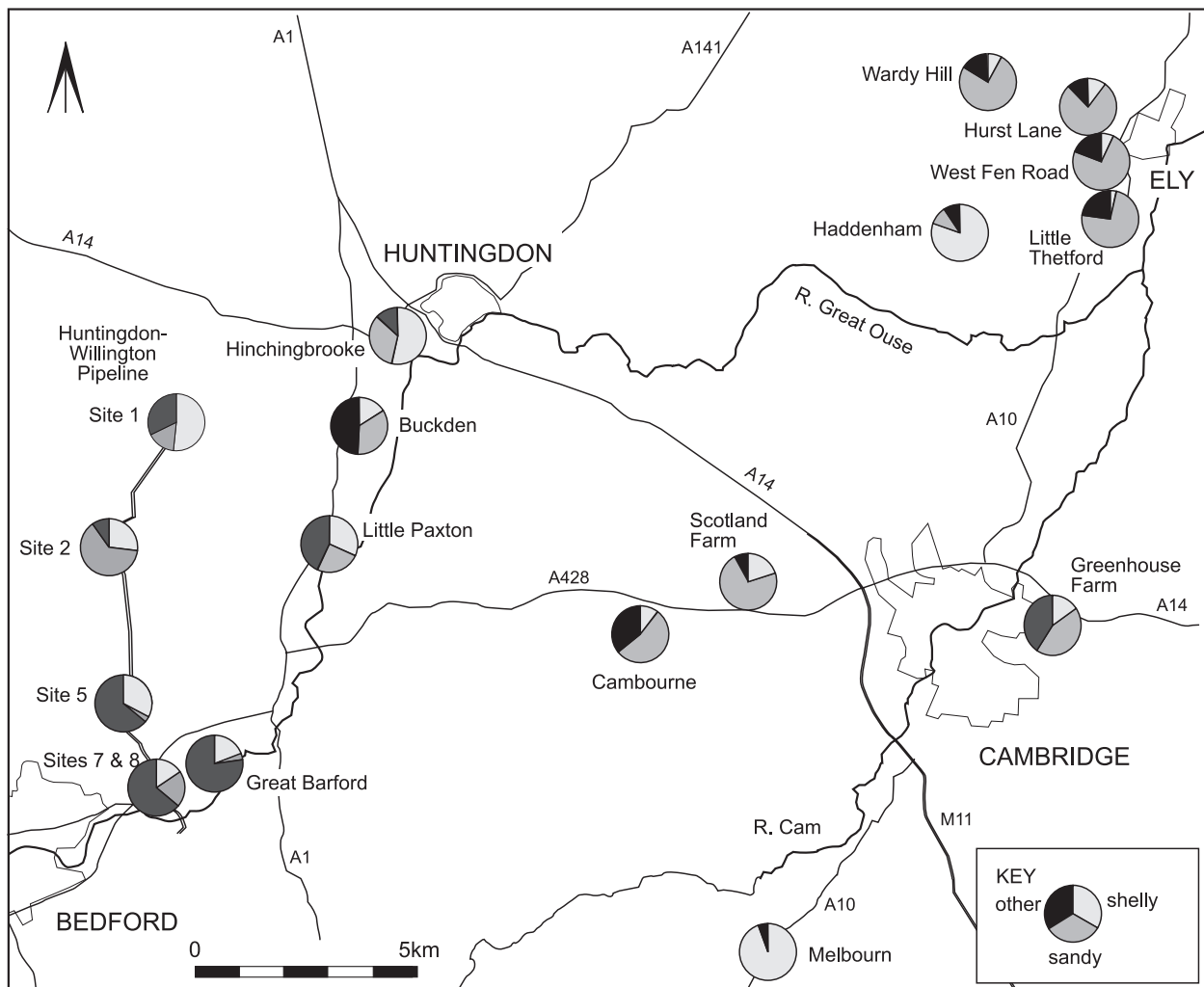


Figure 2.11 The relative distribution of middle Iron Age Sandy and Shelly wares in west Cambridgeshire and east Bedfordshire

enclosure if this area were liable to flooding. As long as surface water could be effectively managed, then the location at the bottom of the slope had its advantages: a degree of shelter from the prevailing easterly wind; a manageable supply of fresh water; proximity to a ridgeway offering good trading links (*e.g.* the non-local quern stones); and a relatively low profile away from a hilltop location. In this respect, the Scotland Farm site offers an interesting contrast to the Roman settlement established on the higher ground at Childerley Gate (Chapters 3 and 4).

A rising water table in the Fens between the late Bronze Age and the middle Iron Age may provide a wider context for the creation of the farmstead (French 2003, 108–109). This trend continued into the later Iron Age, when regular flooding became a problem in low-lying areas within river valleys, traditionally used for agriculture and settlement. Could the builders of the farmstead have moved to this area in retreat from landscapes that were changing or flooding more regularly? As yet, too few sites have been examined on the higher ground west of Cambridge to answer this question. The Scotland Farm pottery assemblage may lend some support to the idea; it is dominated by sandy-quartz fabrics and consists mostly of plain wares, making it more characteristic of sites further to the east or north-east (Fig. 2.11). However, other explanations are possible: this

characteristic may be due to a local geological anomaly in the boulder clay, or alternatively the pottery may have been traded.

If the farmstead were set out in a single event, from scratch, then it would seem plausible that its builders had moved to Scotland Farm from elsewhere. Whether near or far is unknown, but either way, they seem to have colonised previously unoccupied land. Oosthuizen (2006, 87) has suggested that the development of a number of the watercourses, including the Dam Brook, running NE–SW from the ridges of the Bourn Valley, can be dated to the Iron Age (see Chapter 6.2). It is possible that the early ditch L4 was set out when the first attempts to manage the winterbourne, prior to settlement, were made. No direct evidence for such an undertaking was recovered during the excavation. However, similar evidence, in the Iron Age, for the deliberate draining of low-lying land to make it more habitable has been found at Love's Farm, St Neots (Mark Hinman pers. comm.).

The molluscan assemblage suggests a generally sheltered, moist local environment, but with more open, perhaps grassland conditions nearby, as might be created by areas of pasture enclosed by ditches with well-vegetated margins. There is no definite indication of nearby woodland, although many of the identified species of mollusc are able to exploit woodland. The range of *taxa* in the charcoal from the farmstead probably derived from

a variety of sources. Hedges of hawthorn and blackthorn would both have been used to line boundary ditches, while patches of nearby scrub may also have been exploited. The Iron Age landscape of open grassland, interspersed with thorn hedgerows, scrubland and occasional stands of managed woodland, would have been similar to that of the present day.

#### *Morphology and function* (Figs 2.4, 2.6, 2.8–2.9)

The farmstead at Scotland Farm had an unusual layout for a middle Iron Age settlement, although it may be part of a pattern of increasing settlement nucleation witnessed in eastern England in the 3rd century BC (Bradley 1984, 139). Linear series of enclosures, such as that represented by G27, G28 and G29, are comparatively common on Romano-British sites — a ladder enclosure was identified less than half a mile away at Childerley Gate (Chapter 3) — yet there are far fewer examples from the Iron Age. Comparable settlements exist at Twywell, Northants (Jackson 1975) and at Topler's Hill, Beds (Luke 2004), yet few others are known from southern England. The morphology of the farmstead is suggestive of a settlement of a later date, yet the low-status, largely locally-made artefactual assemblage is more typical of a middle Iron Age site.

The layout of the farmstead changed very little during its lifetime. The only clear evidence for re-cutting of the ditches came from the northern enclosure. On two occasions, the ditch was enlarged and the entrance was shifted. For most of their length, the re-cuts completely truncated the earlier ditch, raising the possibility that the southern and middle enclosures were also initially defined by a much smaller ditch. However, no evidence for this was found in the numerous excavated segments.

Although it is assumed that the main elements of the farmstead were set out as a single entity, it is difficult to assess whether or not the features within the enclosures and compounds were all contemporary. Plough damage only serves to exacerbate this difficulty. If the farmstead were in use for more than 100 years, as could be concluded from the pottery assemblage, then possibly very few of the pits and roundhouses would have been contemporary. Only rarely do stratigraphic relationships indicate that a new pit replaced an earlier one (Figs 2.8, f and 2.9, b and c). Pottery was recovered from most of the pits and buildings within the farmstead, but its dating is not sufficiently refined to enable chronological distinctions between features to be made. It is even possible that the farmstead was occupied for a shorter period of time, although it is also worth reflecting that it may only ever have supported a relatively small number of inhabitants. Future improvements in the understanding of the chronology of middle Iron Age pottery in the region may allow re-examination of the dating of sites like Scotland Farm, both in terms of when they were created and how long they remained in use.

The enclosure ditches are the main feature of the Scotland Farm farmstead; their size is particularly striking (Figs 2.4 and 2.6). As recorded on site, the southern enclosure ditch SG117 was 3.6m wide and 1.5m deep; before truncation by both medieval and modern ploughing it would have been even bigger. As Collis (1996) has discussed, enclosure ditches were dug for a variety of reasons and it is not always easy to decide which ones are

most pertinent in any given case. At Scotland Farm, it is unlikely that they were designed to defend the farmstead against attack. The southern and middle enclosures had external banks on at least part of their perimeter, which would have been of little use for defence (Collis 1996, 88). Two further, 'practical' explanations can be suggested: drainage and livestock control.

Drainage can probably be discounted as a primary explanation for the scale of the ditches. Although drainage gullies were constructed within the southern and northern enclosures, and the molluscan and geoarchaeological evidence points to the seasonal presence of standing water, digging a ditch that was over 3.6m wide and 1.5m deep was surely excessive. The explanation that they were for keeping animals either in or out is perhaps more reasonable. The animal bone assemblage is dominated by cattle, with a slightly lower number of sheep or goats and a few horses. If the middle enclosure were used for corralling livestock, presumably cattle, it would have required a substantial ditch to keep the animals from straying. The southern enclosure would also have needed an equally large ditch to keep them out, if they were being moved along the 'corridor' of land between the two enclosures (Fig. 2.1).

However, people do not always design their surroundings for purely practical reasons. The size of the enclosure ditches, and the external banks that at least the southern and middle enclosures possessed, may be related to conspicuous display. Collis states that boundaries could be used to denote status in three different ways: to demonstrate the importance of a particular individual or family within a farmstead, or to impress either the wider community, or people from further afield (Collis 1996, 90). Since all three enclosures had large ditches, the first explanation seems less likely, suggesting that they were designed to impress outsiders. The low-lying position of the farmstead may actually have helped this display, since it would have been clearly visible from the ridgeway to the south.

The farmstead was an integrated unit but there would undoubtedly have been functional variation within it, both between individual enclosures and within the paired enclosures and compounds. Again, however, the severe plough truncation makes it difficult to analyse this variation in detail. The artefactual assemblages from the southern and northern enclosures suggest that they were foci of domestic activity. The same is probably also true of the northern compound, which featured what seems to have been a small storage area with gated access SG139. The presence of three large jars or storage vessels in pit SG150 within this area, combined with the recovery of four fragments of quern stones from nearby, suggests grain storage and processing. In the southern enclosure, the triangular loomweight and two possible spindle whorls may be indicative of domestic textile production, while this enclosure and its compound also accounted for almost all of the *c.* 2kg of fuel ash from the farmstead.

Although roundhouse SG161 in the southern enclosure can probably be identified as a dwelling, the function of the other three roundhouses within the farmstead is less clear. SG126 in the northern enclosure was roughly the same size as SG161; yet SG124 and SG142, particularly the former in the middle compound, were substantially smaller. The term 'roundhouse' is

perhaps inappropriate for these two structures, as they are more likely to have had a non-domestic function.

The one part of the farmstead that appears to fit less comfortably with the rest is the western enclosure (Fig. 2.1). Although it was contemporary with the enclosures to the east of the winterbourne, and its ditch was comparable in size, it had an internal bank rather than an external one. It also produced a significantly smaller assemblage of artefacts, perhaps indicating a different function or a shorter lifespan.

Although the enclosure and quarry pits on Site 8 were c. 300m east of the enclosures and compounds on Site 7, they are thought to have formed part of the same farmstead. The quarry pits produced 2.8kg of pottery, but there were no obvious signs of a settlement in the immediate vicinity. The relatively low average sherd weight of the pottery is consistent with its having been brought from elsewhere, *i.e.* Site 7. The pits were all targeted on an outcrop of chalky marl, which has been used since the Iron Age for liming fields to reduce soil acidity and improve yields (Cunliffe 1996; Havinden 1974). Notwithstanding the imprecision of the pottery dating, the assemblage from Site 8 lacks the earliest material found on Site 7. If the farmstead had already been in existence for some time when the quarry pits were dug, it is tempting to see this as an indication that marl was required to counter a reduction in soil fertility. Of course marl had other uses, such as the construction of cob buildings, and it also cannot be said for certain that the quarry pits were not associated with another, unknown settlement nearby.

Whether or not the quarrying was directly associated with Site 7, the farmstead would undoubtedly have had associated areas of peripheral activity beyond the limit of excavation. Roughly half of the area between Site 7 and Site 8 was stripped, yet it proved to be completely devoid of Iron Age features. It is tempting to conclude that this open ground was used for pasture or, perhaps, for arable cultivation.

#### *Animal husbandry, diet, economy and trade*

The bulk of the animal bone assemblage from the farmstead came from the Site 7 enclosures. Cattle are the predominant species, closely followed by sheep or goat with a smaller but notable proportion of horse (Appendix 13.2.1, Table A39). Site 8 presents a slight variation to this pattern; its much smaller assemblage is dominated by sheep or goats.

These animals have differing worth and requirements. As larger creatures, cattle are more valuable than sheep or goats. Even though their numerical preponderance within the assemblage is only slight, there is little doubt that the inhabitants would have eaten much more beef than mutton (Appendix 13.3.1). When the secondary products, such as milk, are also taken into account, it is clear that cattle would have formed the main economic basis of the farmstead. The shallow valleys of the area, like the one occupied by the winterbourne, would have provided ready access to lush pasture and water. Sheep, however, are more likely to have grazed the drier, more open pasture upslope of the farmstead's enclosures. The presence on the farmstead of the dwarf pond snail, *Lymnaea truncatula*, which is linked with the transmission of sheep liver fluke, suggests that sheep would not have thrived in the damp conditions at the bottom of the slope (Appendix 14.4.1).

The cattle were kept primarily for their secondary products, *i.e.* milk and motive power, although they would inevitably have been culled for their meat and for leather from their hides. However, the sheep or goats were subject to a more mixed regime. As evinced by the number of young adults, they were kept for their wool and their breeding ability — a few infant bones were recovered — but were culled before their meat became too tough. It is unknown whether the secondary products, and indeed the meat, were solely for the farmstead's use, or whether a surplus was available for trading. However, it seems likely that a farmstead with good grazing land, specialising in cattle, would have been able to produce a surplus that was perhaps bartered for grain from elsewhere if the inhabitants did not grow enough for themselves. In comparison with the early Iron Age, this type of economic specialisation appears to have become more widespread during the middle Iron Age (Bradley 1984, 140).

A number of other animal species were kept on the farmstead. The few bones recovered suggest that pig was not an important part of the inhabitants' diet. Of more significance are the horses, which were most likely kept for a mixture of farm work and transport. There is no evidence that they were being bred on site, suggesting either that they were imported, or perhaps that feral animals were being captured and tamed. There were also a small number of dogs, including one mastiff-sized animal. There is no evidence that game played a significant part in the inhabitants' diet, probably due to the ready availability of beef, suggesting they were kept as guard dogs rather than for hunting.

Aside from meat, there is little evidence for other foodstuffs used by the farmstead's occupants. Wild food resources appear to have played only a minor part in their diet — a single raspberry or blackberry seed was recovered from the middle enclosure. The virtual absence of such evidence may, however, be a result of the lack of waterlogged or mineralised assemblages.

Charred plant remains, mainly from the last stages of crop cleaning and possibly food preparation, were also sparse (Appendix 15.3.2). Hulled wheat (including spelt) and hulled barley were identified. The uniformly low density of the material means that no crop processing areas can be identified with confidence. The few weed seeds do not provide any detailed ecological information, but probably came from arable weeds that were harvested with the grains and removed by sieving; they may subsequently have been used as tinder. Small quantities of chaff are indicative of de-husking of wheat during the final stages of crop-cleaning. The presence of four quern stones from the northern compound and enclosure, plus a fifth from the quarry pits on Site 8, proves that grain was being processed on site; yet it is far from clear whether cereals were being cultivated by the inhabitants of the farmstead.

The quern stones demonstrate that the inhabitants of Scotland Farm had access to links, possibly long-distance, with other communities. Occasional erratics are present in the boulder clay but it is highly unlikely that enough suitable sandstone could have been found locally to make the querns. Sandstone also dominated the assemblages found on nearby excavations at Cambourne (Hayward 2006) and Caldecote Highfields (Kenney 2007), possibly indicating a common source. Petrological analysis also provides some evidence for the import of non-local pottery (Appendix 5.5.1), although the majority was made

locally. The wide range of geological inclusions in the boulder clay makes it difficult to identify the exact source of material used in Iron Age pottery in this region (Morris and Woodward 2003, 289).

#### *Ritual elements of the farmstead* (Fig. 2.1)

The layout of the farmstead itself shows evidence of not wholly utilitarian considerations. The creation of the earliest boundary ditch L4 may have had a symbolic element, serving to distinguish managed, tamed land from the wild land beyond. It also seems more than coincidental that the strip of land defined by L4 broadly constitutes the area which was subsequently occupied by the farmstead (Fig. 2.1). The significance of this is uncertain, but it is possible that L4 in some way prefigured the farmstead, itself a planned settlement of a type that is increasingly being recognised in the archaeological record (Haselgrove *et al.* 2001, 29).

At least three of the four roundhouses at Scotland Farm faced broadly east (Fig. 2.1); too little of the fourth survived to be certain of its orientation, although it is also likely to have faced east. Oswald (1997, 87–95) and others have argued persuasively that the easterly or south-easterly orientation of roundhouses has a symbolic, rather than purely functional, significance. Given the dominant NE–SW orientation of the farmstead and its surrounding natural landscape, this was almost certainly the case at Scotland Farm.

A number of possible instances of the structured deposition of artefacts were recorded within the farmstead. Two possible chalk spindle whorls were recovered from the southern ditch terminal in the north-east facing entrance of the southern enclosure (G27). Gwilt (1997, 162), in his study of the Iron Age settlement at Wakerley, Northants, notes that the material type of the object, rather than its original function, was the important factor in selection for deposition. Naturally occurring material, such as chalk, that has been humanly altered may have served to mark the boundary between the domesticated interior of the enclosure and the wild exterior (Appendix 3.2.1).

Other entrances were similarly marked. A large deposit of animal bone was recovered from the northern terminal of the middle enclosure. The northern ditch terminal of the re-cut northern enclosure contained a concentration of pottery and animal bone. Storage pit SG136 was situated directly opposite the re-positioned entrance to the northern enclosure; its re-use for the burial of domestic detritus, including the skull and pelves of a dog, may have been to encourage fertility (Parker Pearson 1996, 125–7).

There may also be an element of ritual behaviour in the deposition of a loomweight in the southern enclosure ditch and four fragments of quern stone round the edge of the northern compound. Two of the quern stones display indications of re-use: one has a blackened surface, suggesting it became a hearth stone; and one has been roughly worked into the shape of a disc. Artefacts such as quern stones would have been particularly important, since they were items that had actually been used for activities with which rituals could be associated, *i.e.* food processing (Hill 1995, 108–9).

A further possible focus for ritual activity was the group of quarry pits on Site 8. These produced 2.8kg of

pottery, together with a quern stone fragment and a whetstone. This assemblage may have had a connection with a fertility rite: if the marl was used to improve the soil, then it may have been deemed propitious to offer artefacts connected with food processing, storage and consumption in thanks for the life-giving qualities of the quarried material.

Finally, the proximal portion of an adult right femur was found in the farmstead's southern enclosure ditch (Appendix 12.3.1). Traces of gnawing by rodents indicate that the bone had been exposed elsewhere before becoming incorporated into the fill of the ditch. This may be evidence for excarnation, followed by selective placement around a domestic enclosure, and may, to some extent, explain why no evidence of either cremation or inhumation was recovered from any of the Iron Age sites that were excavated. Hill has argued that individual bones were sometimes specifically selected and placed around the margins of a settlement (Hill 1995, 105–8); this may have been done as part of a mortuary practice, or as a celebration of the passage between life and death.

Thus, a range of possible structured deposits, including chalk spindle whorls, pottery, and animal and human bone, were present at Scotland Farm, both within the settlement area and within the quarry pits to the east. Several local sites (Mark Hinman pers. comm.) have produced similar evidence, most notably Trumpington Park and Ride, Cambridge where votive deposits were placed in middle Iron Age pits. Enclosure ditches at Bob's Wood, Hinchbrook (Huntingdon) also contained fragments of broken quern stones. There are risks in the uncritical interpretation of such evidence based on parallels with sites in other parts of the country, such as Wessex (Hill 1995). However, the Iron Age inhabitants of west Cambridgeshire were part of a much wider community, with common systems of belief, and had links beyond those that we can identify through the patterns of artefact distribution on archaeological sites.

### **2.3. Middle to late Iron Age enclosure (2nd–1st century: Phase 2.2)**

#### **2.3.1. L7: enclosure at Bourn Airfield (Site 3)** (Figs 2.12–2.13)

This enclosure was located at the western end of Bourn Airfield and covered an area of at least 550m<sup>2</sup> (Fig. 2.12). It was defined by ditch SG206, which was up to 1.1m wide and 0.4m deep. The full extent of the enclosure is unknown; it is unclear whether its southern side was open, or whether the southern terminal of the ditch marked the northern side of an entrance, with the enclosure continuing beyond the excavated area. A small pit was located at the northern end of the enclosure, whilst a larger pit SG207 was revealed to the east.

Evidence for the character of the local environment is very limited. The small charcoal assemblage was dominated by blackthorn and hawthorn. Few molluscs were recovered from the enclosure ditch, but the presence of the freshwater species *Lymnaea truncatula* and *Anisus leucostoma* strongly suggests that the ditch was wet, but also dried out seasonally.

Much of the Iron Age pottery assemblage from Bourn Airfield was residual in later features, and is in a poor, fragmentary condition. The assemblage does not include any of the earliest types seen at the Scotland Farm

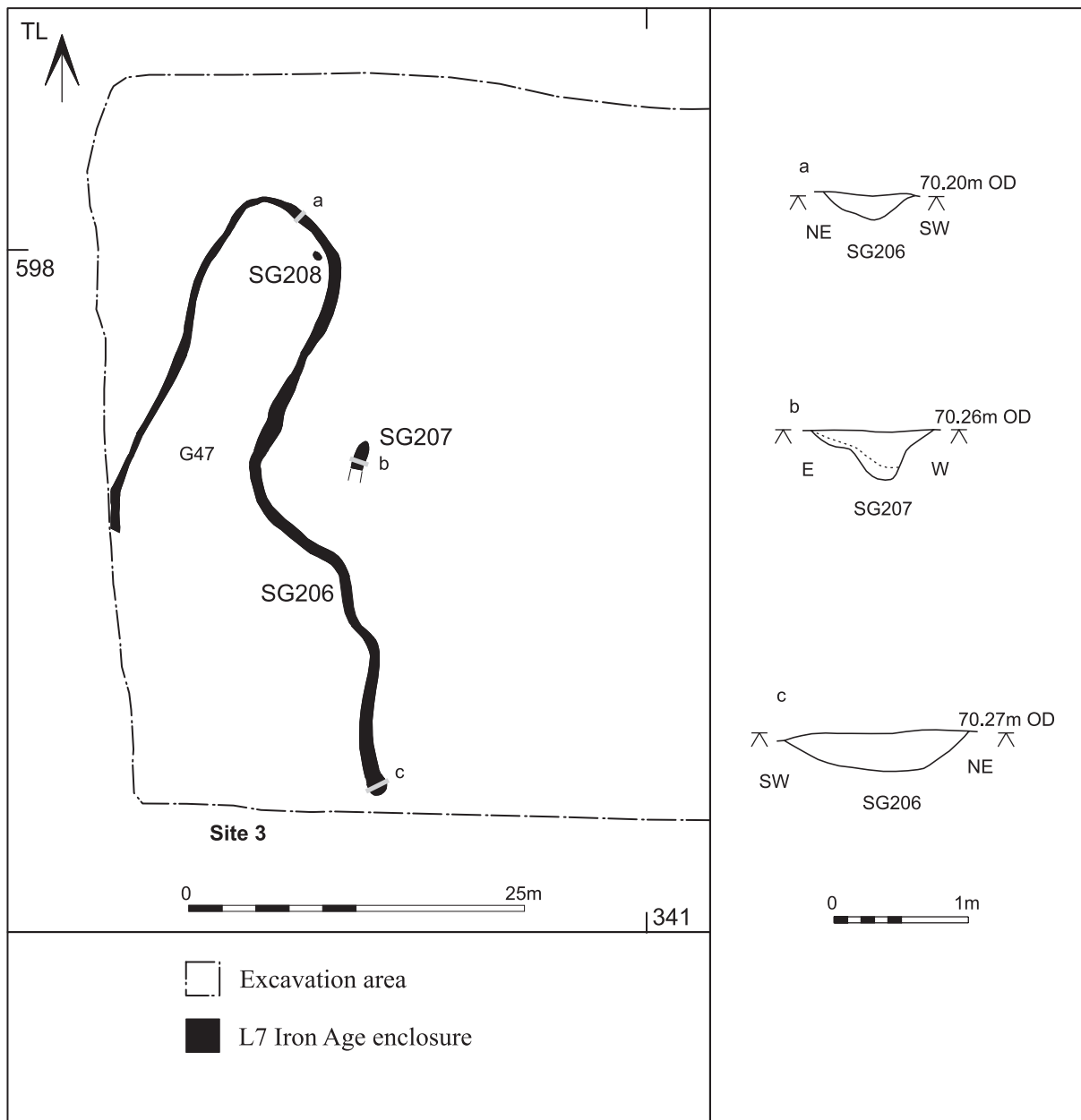


Figure 2.12 Bourn Airfield (Site 3): enclosure G47 and associated pits

farmstead, which suggests that activity at Bourn Airfield may have commenced at a later date (Table 4). A significant proportion of the assemblage comprises a single vessel from pit SG207 (Figs 2.13 and A46, <P26>). Identifiable forms within the assemblage are scarce, but two large, combed storage jars recovered from Roman enclosure G48.1 and drove-way G52 suggest some domestic activity in the vicinity.

**2.3.2. Discussion: enclosure at Bourn Airfield**  
(Fig. 2.14)

The irregular shape of the enclosure, with its significantly narrower northern end, appears to have been designed specifically for corralling animals, even though no evidence was found of a fence or gate to close off the end of the enclosure. It seems unlikely that there was any settlement activity associated directly with the enclosure; the small assemblages of charcoal and pottery probably



Figure 2.13 Bourn Airfield (Site 3): pit SG207, with a near-complete Iron Age vessel *in situ*



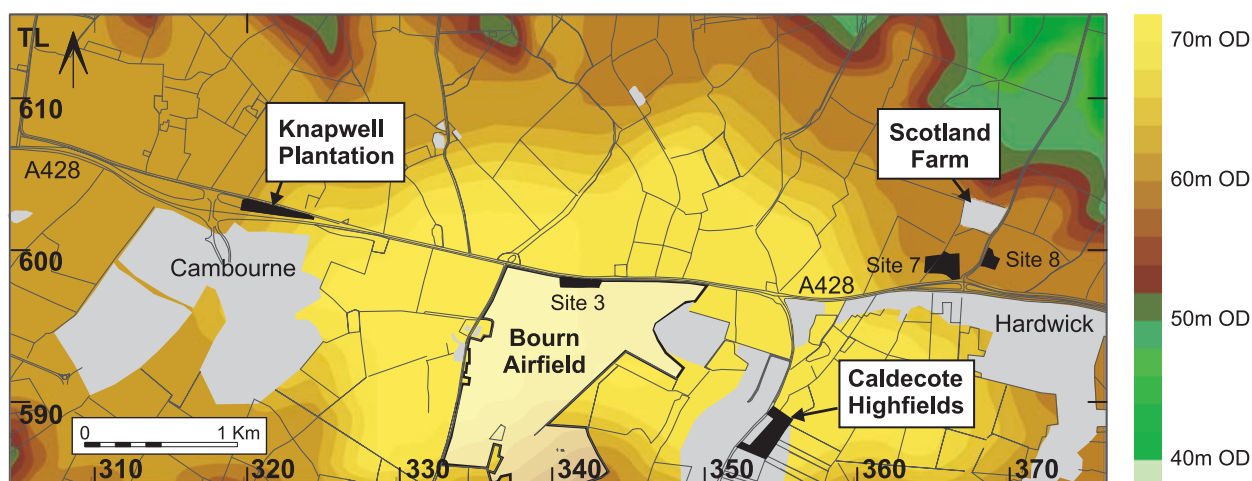


Figure 2.14 The distribution of recently discovered Iron Age sites along the northern edge of the Bourn Valley

derive from the activities of stock handlers, using the enclosure on a temporary basis.

Drove-ways feature strongly in the archaeological landscape around Bourn Airfield. Early Roman drove-ways were recorded at Ash Plantation (Site 2) as well as Bourn Airfield itself (Chapter 3.3). In addition, a number of Iron Age and Roman drove-ways were uncovered at Cambourne (Wessex Archaeology 2003), while a banjo enclosure was revealed at Caldecote Highfields (Kenney 2007). This wide-ranging network of routes almost certainly had its origins in the Iron Age. It is likely that the Bourn Airfield enclosure was one of a number of similar livestock enclosures on this network, perhaps only used on an occasional or seasonal basis.

Although the Bourn Airfield enclosure produced no direct evidence for settlement, there may have been

drove-ways that linked it to two broadly contemporary settlements at Knapwell Plantation, 2km to the west (Wessex Archaeology 2003, 40–52) and Caldecote Highfields, 2km to the south-east (Fig. 2.14). Both of these settlements appear to have tended towards a pastoral economy. The faunal assemblage from Knapwell Plantation was split evenly between cattle and sheep or goats, with very little else. Sheep or goats constituted half of the assemblage at Caldecote Highfields, with the rest mostly composed of cattle and pigs in roughly equal numbers. However, no definite link can be established between these three sites. They may have been unrelated, but it is tempting to see them as linked by a network of drove-ways that stretched across much of the northern ridge of the Bourn Valley.

Phase	Land-use area	Middle Iron Age (5th–3rd centuries BC)*	Middle–Late Iron Age (3rd–1st centuries BC)	Later Iron Age (c. 1st century BC)	Iron Age (non-specific)	Not closely datable *
2.2	7		1		59	
3.2	9			19	42	
4	16.1		13		2	
7	26			1		

Table 4 Iron Age pottery from Bourn Airfield (Site 3)

Note: \* none recovered; category included to facilitate comparison with Table 3

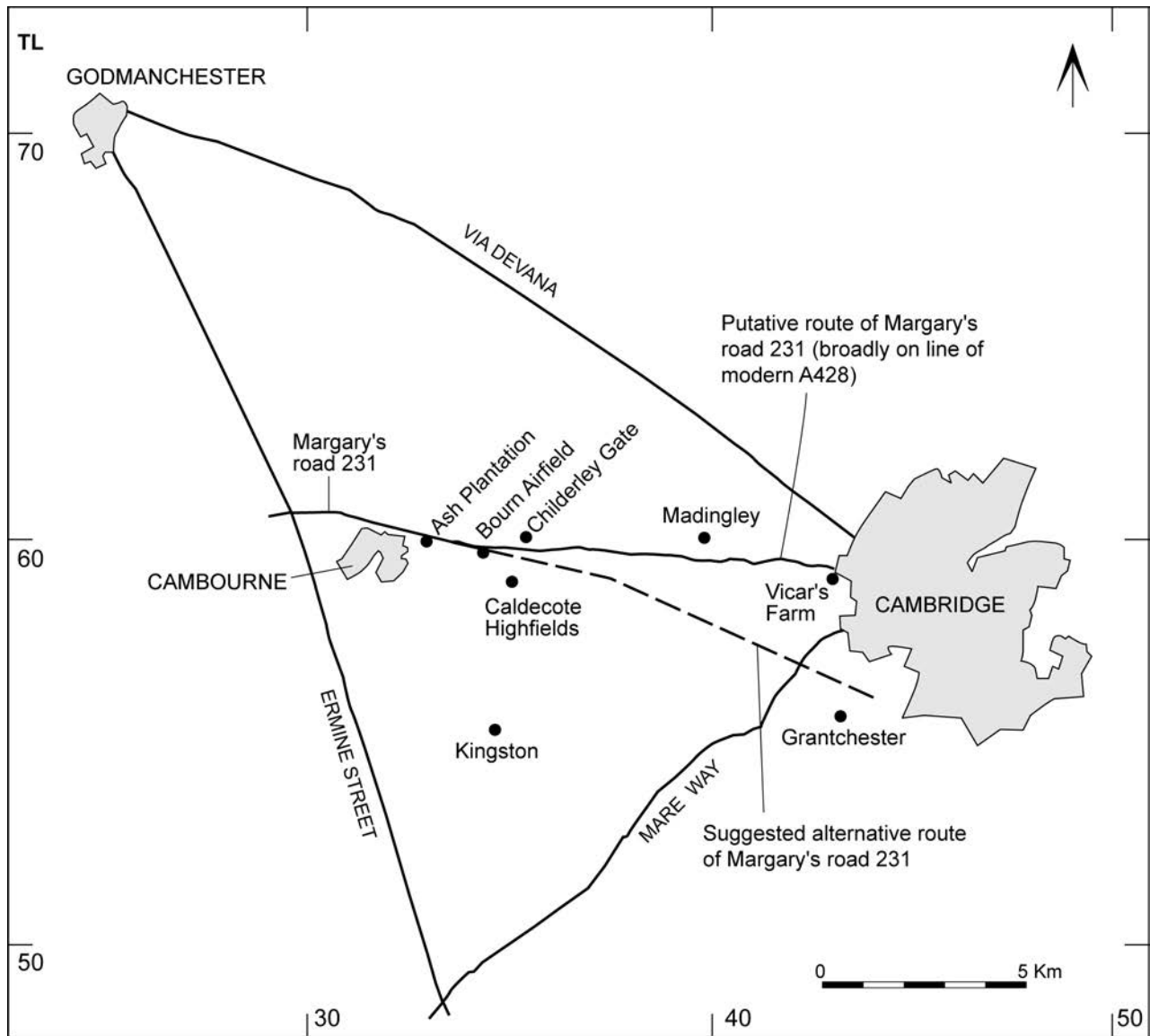


Figure 3.1 The distribution of Roman roads and settlements to the west of Cambridge

# 3. Early to Middle Roman Agricultural Landscape (1st–3rd Centuries AD)

## 3.1. Introduction

(Fig. 3.1)

Archaeological work over the course of the last two centuries has produced a wealth of knowledge about Roman Britain: indeed, ‘in terms of excavation and fieldwork [Britain is] probably...the most intensively studied province in the Roman empire’ (Jones and Mattingly 2002, v). Aerial photographs in particular have revealed innumerable sites throughout England, whether urban, military or rural, and there are few parts of the country where a strong Roman presence cannot be identified.

The area to the west of Cambridge is surrounded by Roman remains. Its western edge is defined by Ermine Street; the *Via Devana* lies to the north-east, linking the nearby Roman towns of Cambridge and Godmanchester; while Mare Way lies to the south-east (Fig. 3.1). Furthermore, the route followed by the A428 is believed to have been a road in Roman times, and was probably a prehistoric ridgeway in origin (Margary 1973, 205). Despite this, it was traditionally believed that the heavy clay soils in this area would have been unsuitable for Iron Age and Roman farming communities. Whereas the surrounding gravel terraces, particularly that of the River Great Ouse (Dawson 2000), were long ago shown by aerial photography to have been widely populated from at least the Bronze Age, the true density of Roman settlement and agriculture in the triangle between Ermine Street, Mare Way and the *Via Devana* has only recently begun to be recognised.

Two main factors can be held to account for the perceived lack of Roman activity in this area. Although aerial photography can produce impressive results on the gravel terraces in river valleys, crop-marks are less frequently detected on heavy clay soils, thereby producing a distorted view of settlement densities. The second factor is the lack of antiquarian excavation in this area. A common trait of the farmsteads now being uncovered in this area is that they are mostly ordinary, relatively low status settlements; ‘they are much less attractive to those who measure knowledge in terms of a handsome or copious yield of objects’ (Collingwood and Richmond 1971, 176). Only now is this imbalance beginning to be redressed, primarily through the development-led excavation of such ‘less attractive’ sites.

Two decades of excavation and targeted aerial photography on the clay lands to the west of Cambridge have revealed an extensive and complex Roman landscape (Mills and Palmer 2007). In addition to the three farmsteads and two areas of field systems revealed on this road scheme, other Roman settlements have been identified at Madingley (Tipper 1994), Caldecote Highfields (Kenney 2007) and, in particular, within the new town of Cambourne (Wessex Archaeology 2003).

These sites are all clustered along the A428 (Fig. 3.1), although a stone column and a spread of Roman pottery were also found further south at Kingston (HER CB15744 – MCB15744). It is possible that excavation away from the A428, *i.e.* further from the influence of Margary’s Roman road No. 231, may be less fruitful. However, this minor road is unlikely to have been the most important factor in the organisation of the surrounding countryside, so that a similar density of sites might be anticipated.

### 3.1.1. Margary’s Roman road No. 231

(Figs 1.1, 3.1)

Before discussing the evidence for Roman settlements revealed by the road scheme, it is worth considering a feature which proved to be more difficult to identify. The long-held belief that the A428 is on the line of a Roman road was the rationale behind the excavation at Camford Way (Site 10). Wheels ruts were identified but they are more likely to have been medieval, and there was no direct evidence for a road that was in use during the Roman period (Chapter 5.2.2).

Although technically correct, the term ‘Roman road’ is perhaps misleading when applied to the route that ran along the northern edge of the Bourn Valley during the Roman period. Whereas military roads were metalled, straight and reasonably well maintained, roads used primarily by local communities often lacked metalling and were little more than tracks, commonly meandering along the lines of previously established ridgeways (Jones and Mattingly 2002, 175–7). Roadside ditches (if there were any) are commonly the only physical remains of such roads, making them essentially indistinguishable from drove-ways.

Roman road 231 (Margary 1973, 205) was almost certainly just such a minor route, which developed along roughly the same course as an earlier ridgeway. Excavation at Love’s Farm, St Neots has revealed, near the line of the modern road, two substantial roadside ditches that were constructed in the Iron Age, with no evidence for a metalled surface (Mark Hinman pers. comm.). A section of road was also identified in Cambridge at both New Hall (Evans and Lucas forthcoming) and Trinity Hall (Wills 2004). The New Hall road did display evidence of a metalled surface, but only in localised patches. Its relatively low quality, only a few hundred metres from the Roman town at Cambridge, suggests that it was only a minor road. It is not even certain that the New Hall road can be equated with Margary’s road 231, as its alignment appears to take it too far north. In view of the importance to Cambridge of its western hinterland, more than one road into the town from the west may have been required.

It is also possible that road 231 may have diverged from the line of the A428 as it approached Cambridge from the west (Fig. 3.1). Field boundary alignments on the western edge of Hardwick (Fig. 1.1) could be used to

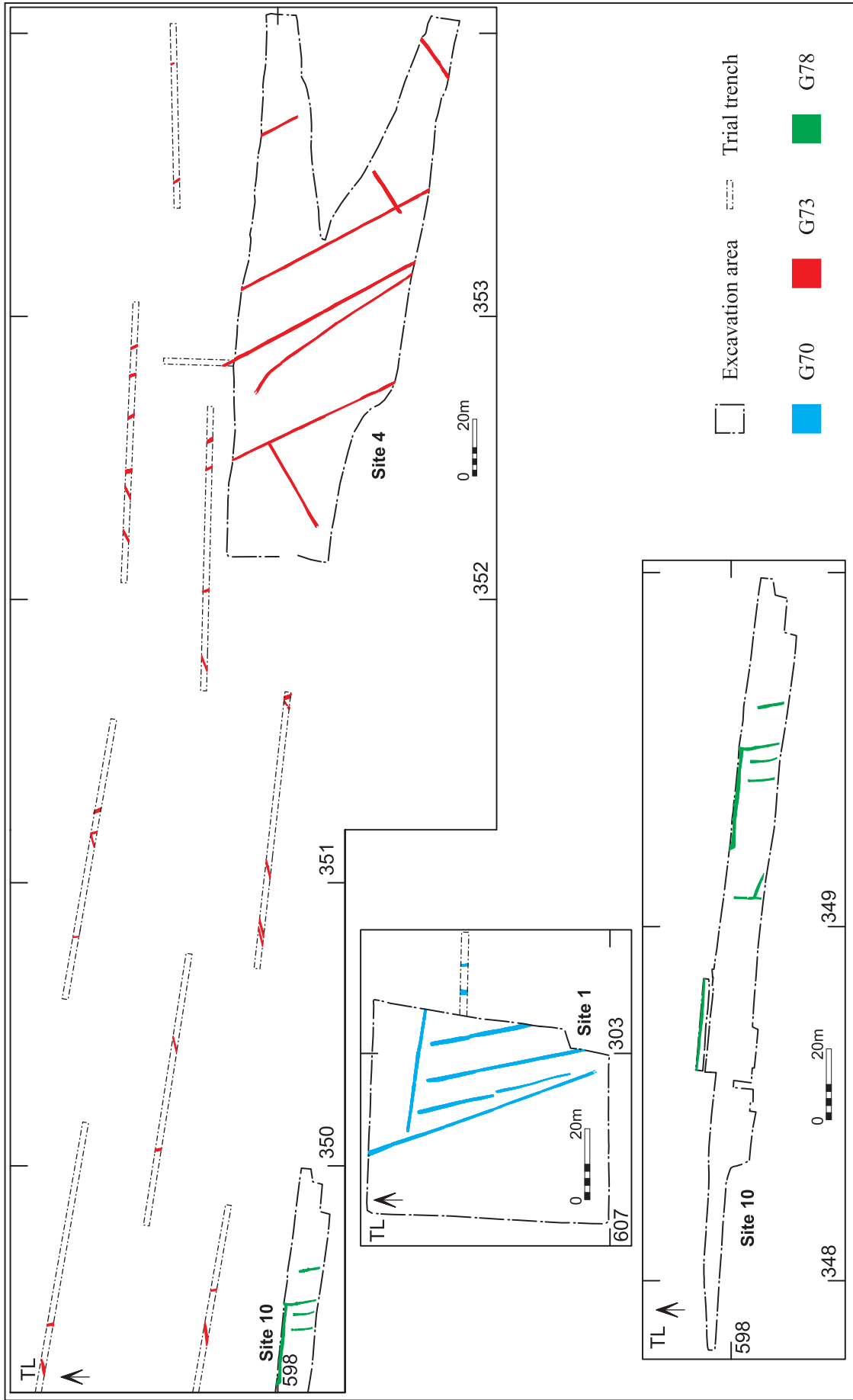


Figure 3.2 Early Roman field systems L20 at Caxton Gibbet (Site 1), Childerley Chapel (Site 4) and Camford Way (Site 10)

suggest that, to the east of Bourn Airfield (Site 3), the Roman road followed a straighter course than its modern counterpart. This would have taken it more in the direction of Grantchester than Cambridge, a suggestion which has already been made elsewhere (Oxford Archaeology 2002, fig. 2.2). The idea of a more southerly route is supported by the presence of Roman field systems between Childerley Chapel (Site 4) and Camford Way (Chapter 3.2.1). There is no indication of a gap in these fields through which the road could have passed, which at the very least suggests that its course lay to the south of Camford Way.

Whatever the precise course of Roman road 231, it is unlikely to have had a far-reaching impact on the surrounding countryside. It should not be seen in the same light as a road such as Ermine Street; it was a minor thoroughfare on an existing ridgeway which had already been in use for hundreds of years. This is not to say, however, that it had no impact on its immediate environs: the enclosures found at Bourn Airfield appear to have been aligned perpendicular to the line of the putative road (Chapters 3.3.2 and 4.2), while Roman inhumation burials, including a stone coffin, were discovered in 1942 during the construction of the airfield (NMR TL 35 NW 25; SMR03274).

Excavations at Ash Plantation (Site 2), Bourn Airfield and Childerley Gate (Site 5) all revealed drove-ways, further examples of which were also identified at Cambourne and Caldecote Highfields. Roman road 231 would have provided a link between Cambridge and Ermine Street, yet it may, in effect, just have been the largest in a wide network of drove-ways covering the whole area between the two. It is unlikely, at this distance from the nearest Roman town, that the road ever amounted to anything more than a rough track.

## 3.2. Field systems (1st century: Phase 3.1)

### 3.2.1. L20: field systems at Caxton Gibbet (Site 1), Childerley Chapel (Site 4) and Camford Way (Site 10) (Figs 3.2–3.3)

The remains of field systems were found at Caxton Gibbet (G70), Childerley Chapel (G73) and Camford Way (G78), and also in trial trenches between the latter two sites (Fig. 3.2). Crop-mark evidence suggests that the excavated remains at Caxton Gibbet were only a small part of an extensive field system (Fig. 3.3); similar fields were also identified during nearby excavations at Cambourne (Wessex Archaeology 2003). The layout of these field systems was very regular, and resembles the ‘Celtic’ fields seen elsewhere in Cambridgeshire and across much of the country (Jones and Mattingly 2002, 235–7).

The infill of the ditches that defined these field systems was almost completely sterile, with just one sherd of 1st–3rd-century pottery recovered from those at Caxton Gibbet and three sherds of similarly dated pottery from Camford Way. There is consequently little direct evidence to date them, even just to the Roman period, though their stratigraphic relationship with the *c.* 12th–13th-century furrows at Caxton Gibbet at least indicates that they were pre-medieval.

Field system G70 was arranged on a NNW–SSE alignment. Two fields were partially revealed within the excavated area, the southern one of which was subdivided into narrow strips that were no more than 10m wide. In the

southern field, there was a gap of *c.* 2m between the subdividing ditches and the northern edge of the field, while the westernmost of these ditches also had a narrow entrance in it. The ditches that defined the edges of the two fields were up to 1.3m wide and up to 0.5m deep, while the subdividing ditches were a similar width but only about half as deep. Plough truncation was particularly severe towards the southern edge of the site where nothing of the ditches survived.

The Childerley Chapel / Camford Way field system covered at least a *c.* 600m stretch of land. Its predominant alignment was NNW–SSE, becoming slightly more NW–SE towards the east. The ditches that defined these fields were comparable in size to those recorded at Caxton Gibbet. Ditch SG273 at Childerley Chapel was slightly curved, and produced a funnel effect with the neighbouring boundary ditch, perhaps for controlling the movement of animals (Fig. 3.2).

### 3.2.2. Discussion: field systems

Discussion of these field systems is hampered by their uncertain date. Aerial photography has revealed vast swathes of ‘Celtic’ fields across much of the southern half of England (Taylor 1987, 33); they are believed to have been laid out in either the Bronze Age or the late Iron Age. The infill of the ditches that defined the field systems between Caxton Gibbet and Childerley Chapel was largely sterile. This means that indirect evidence — primarily their alignment and relationship with the wider landscape — must be used to establish their date.

It is unlikely that the field systems between Ermine Street and Childerley Gate are Bronze Age in date, given the almost complete lack of other contemporary features in the area. A late Iron Age date is possible. However, the ditches at Caxton Gibbet are aligned parallel to Ermine Street, suggesting a Roman date. It should be borne in mind that the subdivision of the southern field at Caxton Gibbet was not seen in the fields to the east, perhaps indicating that they were not related. The ditches from Camford Way to Childerley Chapel were, however, on a similar alignment, and differed from the predominantly NE–SW orientation that defines much of the local landscape (Chapter 6.2). If these fields were influenced by the alignment of Ermine Street, then it implies the presence of an expanse of fields stretching, perhaps intermittently, all the way from Ermine Street to Childerley Chapel.

Although it is likely that these fields were used for arable cultivation, it is unclear how they related to the surrounding landscape. If they were associated solely with nearby settlements, such as the ones identified at Ash Plantation, Bourn Airfield and Childerley Gate, then such a large field system might, if it continued in use throughout the Roman period, explain why there was relatively little evidence of crops being grown at these sites, where the emphasis was largely on pasture. If this were the case, then their precise date of origin is of less significance: the farmers who used them may not, in reality, have been greatly affected by the 1st-century Roman takeover. Evidence from Bourn Airfield, in particular, does suggest a broad degree of continuity in the landscape between the 1st century BC and the 2nd century AD (Chapter 3.3.5).

It is possible, however, that the field systems were set out as a direct result of the Roman conquest: either the

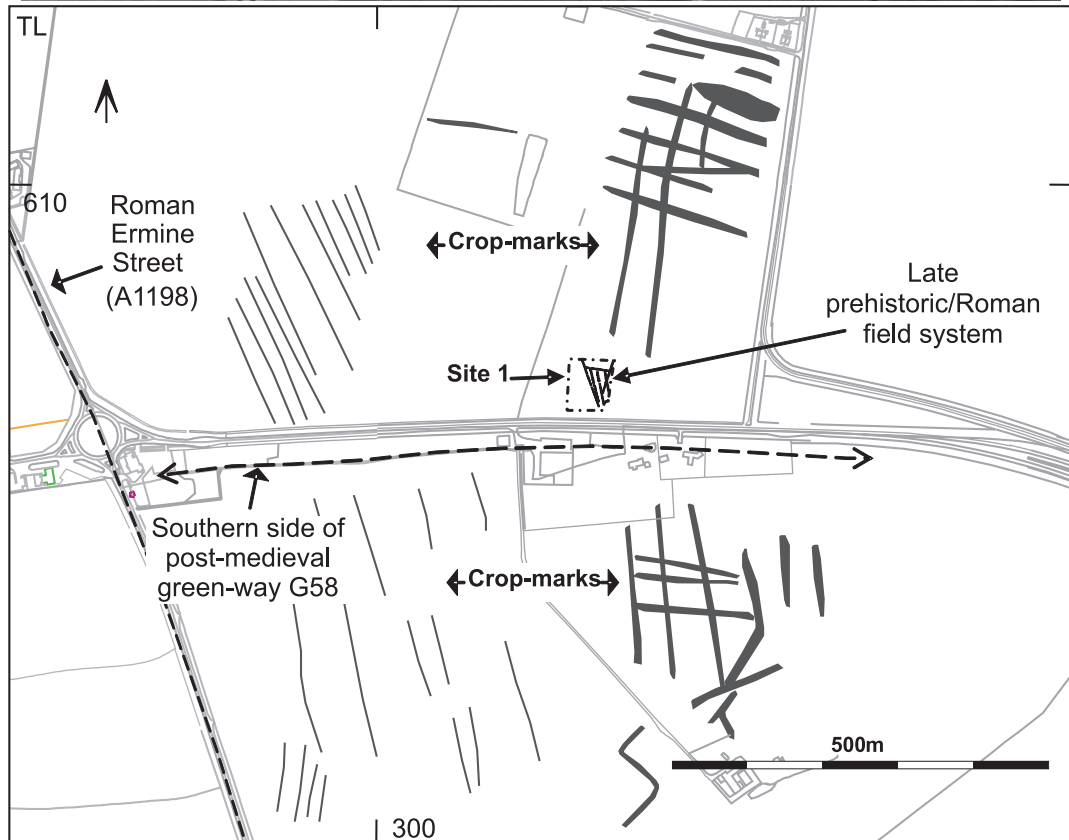


Figure 3.3 Crop-mark evidence for Roman field systems adjacent to Caxton Gibbet (Site 1). Photograph taken in 1969 as part of the Meridian series

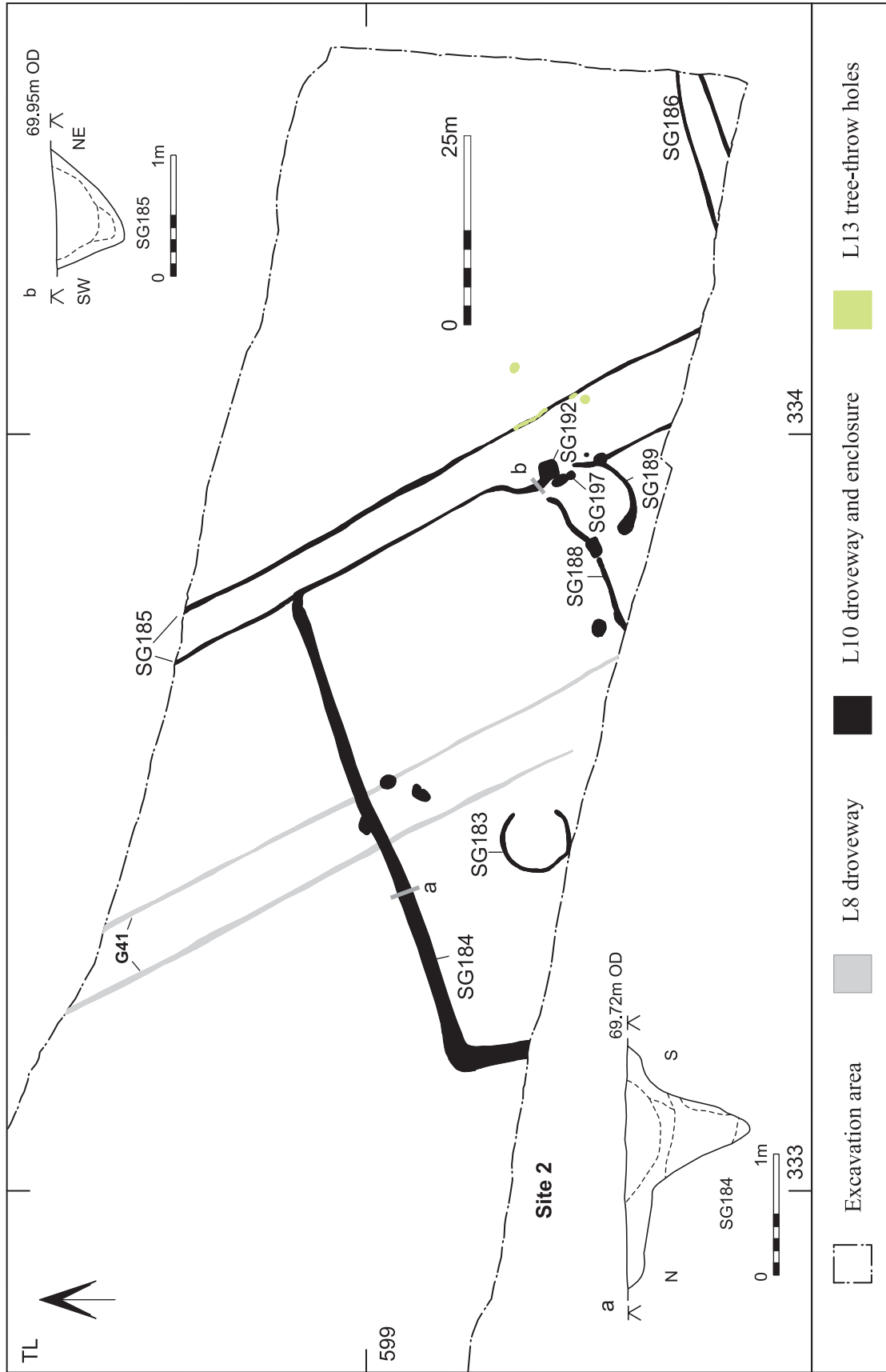


Figure 3.4 Ash Plantation (Site 2): early Roman droveway L8 and middle Roman farmstead L10

local communities needed to grow more crops to pay the new taxes that were imposed on the province; or extra food was needed to supply the army. If the fields were intended to supply food for the army, it is possible that the land was appropriated as part of an official estate — as has been suggested for much of the fens (Malim 2005, 125–9) — or at least that there was official involvement in their setting out over such an extensive area. The regularity of their layout is slightly reminiscent of centuriation (Taylor 1987, 57–9), whereby large areas of land were divided along two main axes, usually either roads or watercourses. Outside of Italy, this type of land reorganisation was usually associated with the establishment of colonial towns, which are notably lacking in this part of East Anglia. Even in the vicinity of *coloniae* such as Colchester and St Albans, no conclusive examples of centuriation have been found. There is currently insufficient evidence to claim the field systems along the northern ridge of the Bourn Valley as an example of centuriation; yet it is possible that they represent a less structured, but equally extensive, form of Roman land division.

However, given the sparse artefactual evidence, the date of the field systems, let alone whether they were constructed by local communities or by Roman officialdom, remains uncertain. During the medieval period, arable agriculture was practised predominantly on the lower slopes of the Bourn Valley (Oosthuizen 2006, 60) and it seems unlikely that Roman farming communities would have chosen this higher ground in preference to the more fertile area to the south. This perhaps supports the

theory that the fields were constructed to supply food for the army. Practical considerations often meant that the Roman army had to settle for whatever the local population could spare (Thomas 2007). The extra demand for food, however, would have been relatively short-lived, and the fields may have been abandoned after only a short period of time. However, there is some evidence that the farmstead at Childerley Gate (Site 5) may have been part of a large, official estate (Chapter 3.6.4) and it is possible that the fields remained in use as part of this estate.

### 3.3. Early to middle Roman agricultural landscape (2nd century: Phase 3.2)

Although road schemes offer the chance to examine a lengthy transect across the countryside, they inevitably reveal only a narrow slice of the broader archaeological landscape. The new sites identified on the A428 scheme include both middle Iron Age and Roman farmsteads, although there is very little evidence for activity in the late Iron Age or for the transition into the Roman period. Occupation in the late Iron Age was, however, identified nearby at Caldecote Highfields (Kenney 2007) and at Cambourne (Wessex Archaeology 2003). Although no transitional sites were positively identified on the A428 scheme, it is possible that the earliest Roman drove-ways and enclosures, described below, and the field systems in Phase 3.1 (Chapter 3.2) originated at the very end of the Iron Age.

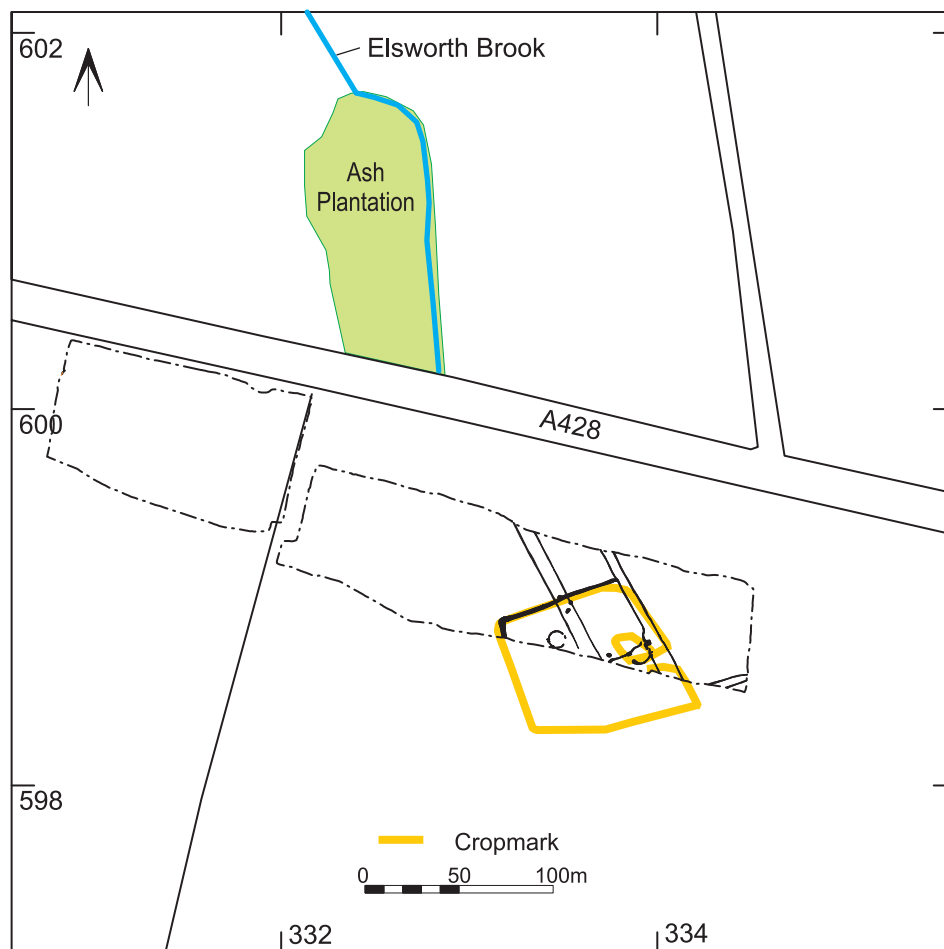


Figure 3.5 Ash Plantation (Site 2): location of the farmstead in relation to the Elsworth Brook, with a crop-mark plotted over the excavated remains



### 3.3.1. L8: drove-way at Ash Plantation (Site 2)

(Figs 3.4–3.5)

Prior to the establishment of a farmstead at Ash Plantation (Chapter 3.4.1), a 6–7m wide drove-way G41 was constructed on a NNW–SSE alignment (Fig. 3.4). This alignment would have taken it towards a brook which rises only *c.* 150m to the north, on the east side of Ash Plantation (Fig. 3.5). The brook does not appear to have a designated name but is referred to hereafter as the Elsworth Brook. The drove-way ditches were small and shallow, partly because of heavy plough truncation which had completely removed the western ditch at the southern edge of the site. A few grams of early Roman pottery are the only artefactual material recovered from the ditches.

### 3.3.2. L9: drove-way and enclosures at Bourn Airfield (Site 3)

(Figs 3.6–3.7)

The early Roman landscape at Bourn Airfield was pastoral in character. Drove-way G52 and enclosures G48 and G51 were constructed at Bourn Airfield in L9, the drove-way on an ENE–WSW alignment, the enclosures appearing to share a north–south axis.

The ditches of drove-way G52 were substantial — up to 2.1m wide and 0.6m deep — in comparison with the other drove-ways excavated on the road scheme (Fig. 3.6). The drove-way appears to have been re-established on at least one occasion: a total of four ditches were identified. The level of plough truncation suffered by the two eastern ditches (SG232 and SG233) was such that only part of their original length survived. In view of these re-cuts, the width of the drove-way at any one time is hard to tell for certain; the two western, more substantial ditches SG231 were 4–7m apart.

Only the corner of enclosure G48 survived re-cutting by ditch G48.1 (Fig. 3.7), which has restricted what can be said of its original purpose. The ditch that defined it was only *c.* 0.6m wide and *c.* 0.3m deep. Enclosure ditch G48.1 was much larger — up to 2.2m wide and 0.75m deep — and largely followed the course of the earlier ditch. Ditch G48.1 narrowed considerably towards the western limit of excavation. It is difficult to see how plough truncation alone could account for this; a minor topographical anomaly in this area may subsequently have been ploughed flat. There may have been an entrance to the enclosure at its south-east corner, suggested by an irregularity in the course of the ditch; however, this part of the ditch had been completely destroyed by later features.

Enclosure G48.1 covered an area of at least 1,700m<sup>2</sup>, while a subdivision in its south-east corner defined an area of *c.* 285m<sup>2</sup>. A steep-sided water pit SG213, *c.* 2.6m long, 2m wide and 1.15m deep, was located near the entrance to this part of the enclosure. Two further pits, one large but heavily truncated by ploughing, lay to the north. In contrast, no features were identified within the adjacent enclosure G51, although only its southern end fell within the excavation area. Its ditch was similar in size to that of enclosure G48.1; it also varied considerably in width.

The 1.584kg of pottery recovered from these enclosures and drove-way is probably all 1st–2nd-century in date, although much of the Roman pottery is not closely datable (Appendix 6). It is interesting that 36% of the assemblage comprises Iron Age pottery (Appendix 5, Table A15); half of this came from a single deposit within drove-way G52. The drove-way and enclosures all

contained a larger amount of Roman pottery, and this represents one of the few examples from the road scheme of an assemblage that spans the transition between the Iron Age and the Roman periods.

The infill of enclosure ditch G48.1 also produced 170g of decomposing lava quern (Appendix 3.3.2). No datable, diagnostic traits survive, although trade in these quern stones is thought to have peaked during the 1st and 2nd centuries (Peacock 1980, 50). Their discovery within this enclosure is perhaps surprising, as the study of querns within the broader region suggests that lava querns are more common on urban or villa settlements than small, rural sites (King 1986, 118).

Only eight animal bones were recovered from these features: six from cattle, including the only one recovered as a result of sieving (Appendix 13, Table A43); and one each from sheep or goat and horse. A relatively large molluscan assemblage was recovered, yet this is dominated by the freshwater snail *Anisus leucostoma* (Appendix 14, Table A44), *c.* 500 specimens of which came from a single sample from the primary infill of the drove-way.

### 3.3.3. L20.1: field system and building at Childerley Chapel (Site 4)

(Fig. 3.8)

Two NE–SW aligned ditches G74 at Childerley Chapel cut a number of the field boundary ditches in L20 (Fig. 3.8). They were similar in size to the earlier ditches and their infill was equally sterile. They were probably constructed once the fields in L20 had gone out of use, although it is possible that they represent a restructuring of the earlier layout.

Nearby was a roughly semicircular building G75, which was 7.5m long and 6m wide. The structural evidence for the building comprises six post-holes, five of which had post-pipes. The post-holes were substantial; the largest was 0.8m in diameter and 0.75m deep. Once again, the deposits within these features were all sterile.

### 3.3.4. L21: drove-way at Scotland Farm (Site 7)

(Fig. 3.9)

Drove-way G35 at Scotland Farm was aligned roughly NW–SE (Fig. 3.9) and was 6–11m wide. It was defined by two ditches that had been badly truncated by ploughing; a substantial length of the north-eastern ditch had been completely destroyed. Four small pits were revealed along the course of the drove-way. The infill of all these features was sterile, except for sixteen sherds of 2nd-century pottery, weighing 143g, recovered from a segment of the south-western drove-way ditch (Appendix 6.5.32).

### 3.3.5. Discussion: early – middle Roman agricultural landscape (Phase 3.2)

The 2nd-century landscape along the northern edge of the Bourn Valley was agricultural in character. The excavated remains suggest that it was dominated by pasture, though it should be borne in mind that some of the ‘Celtic’ fields of Phase 3.1 were probably still extant. The dominance of agriculture is not surprising, as the ridge would have been relatively inhospitable for settlement. The molluscan evidence from Bourn Airfield (Site 3) indicates that the underlying clay made the ground very damp, and the relatively exposed ridge would have been vulnerable to cold, easterly and northerly winds sweeping in from the

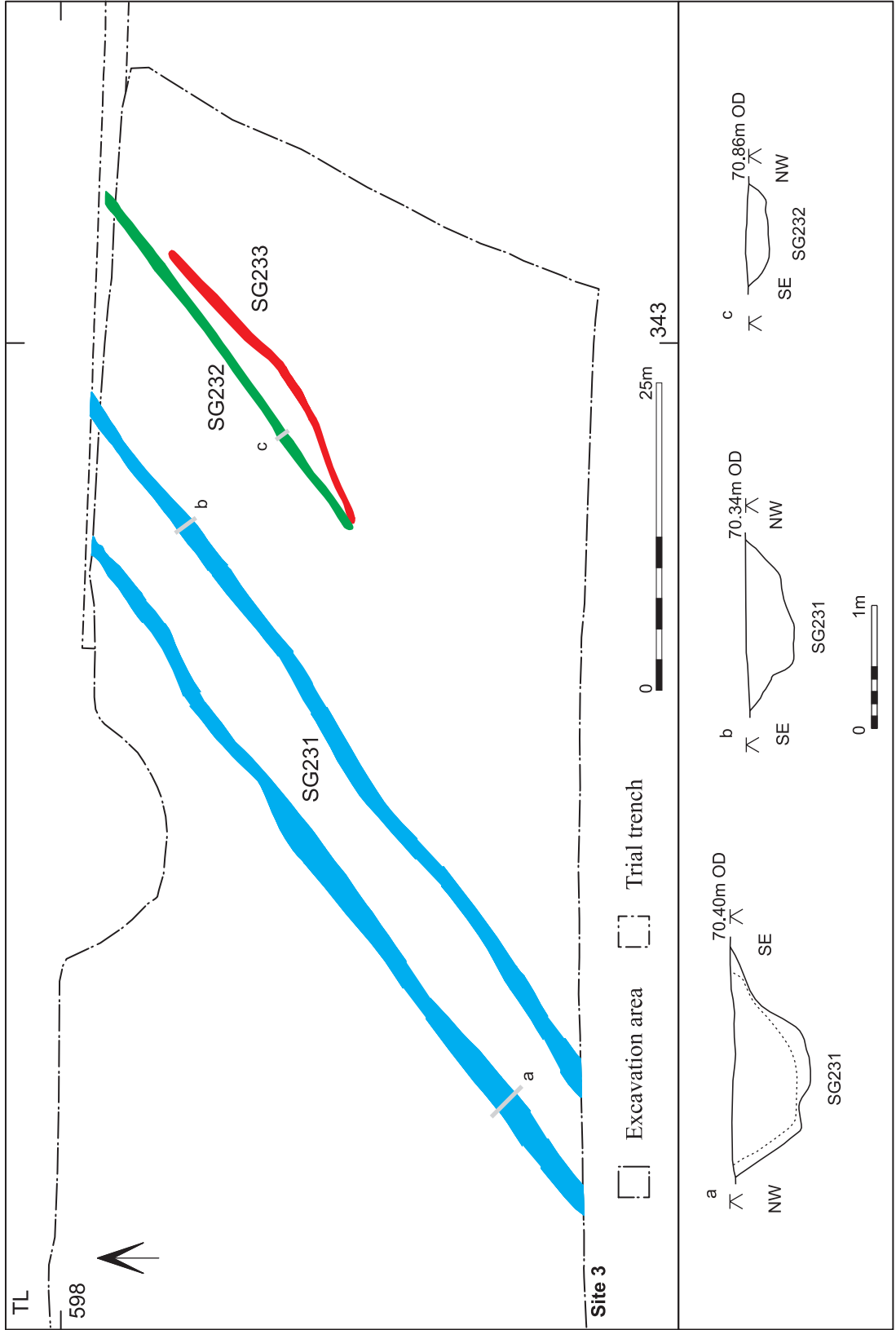


Figure 3.6 Bourn Airfield (Site 3): early-middle Roman drove-way G52

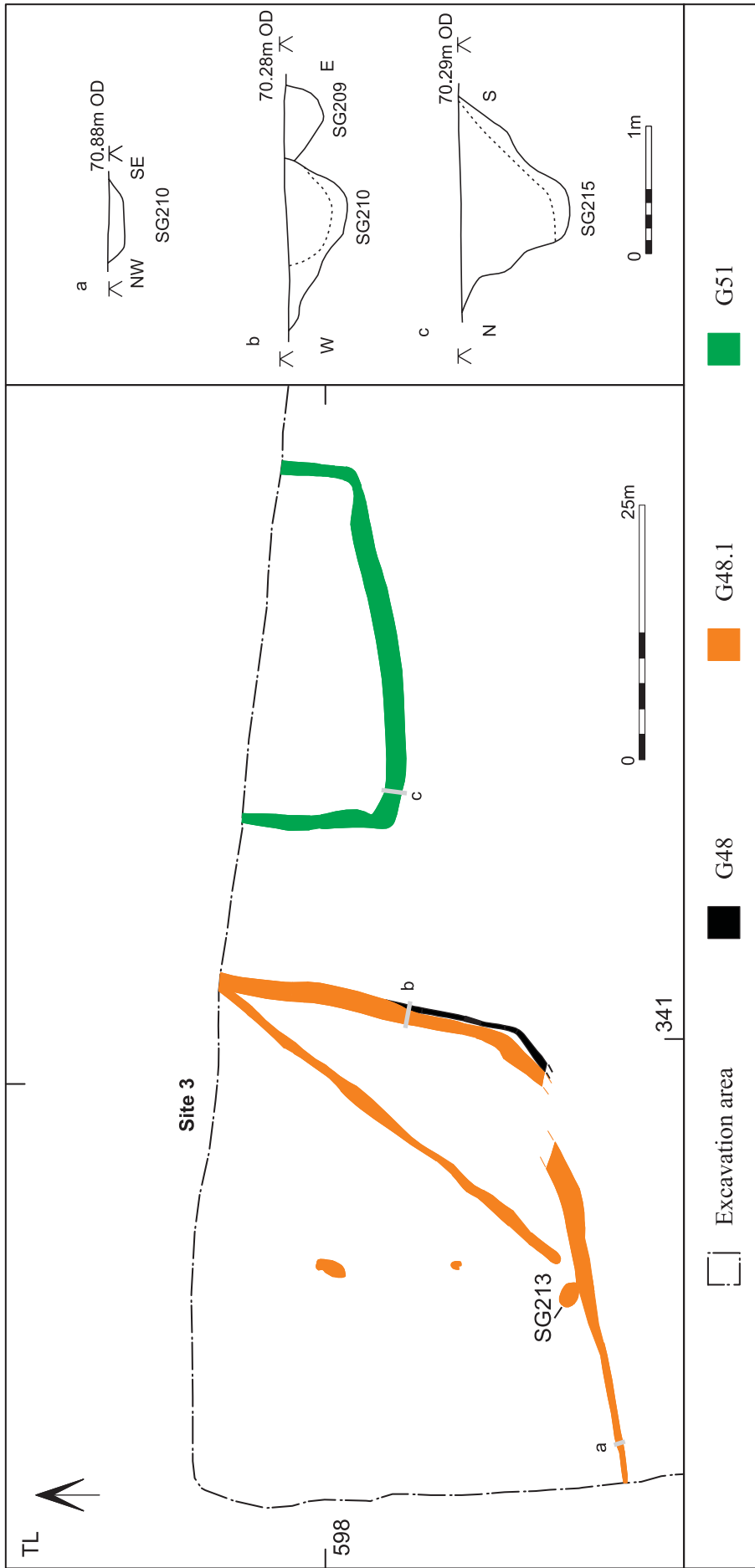


Figure 3.7 Bourn Airfield (Site 3): early–middle Roman livestock enclosures

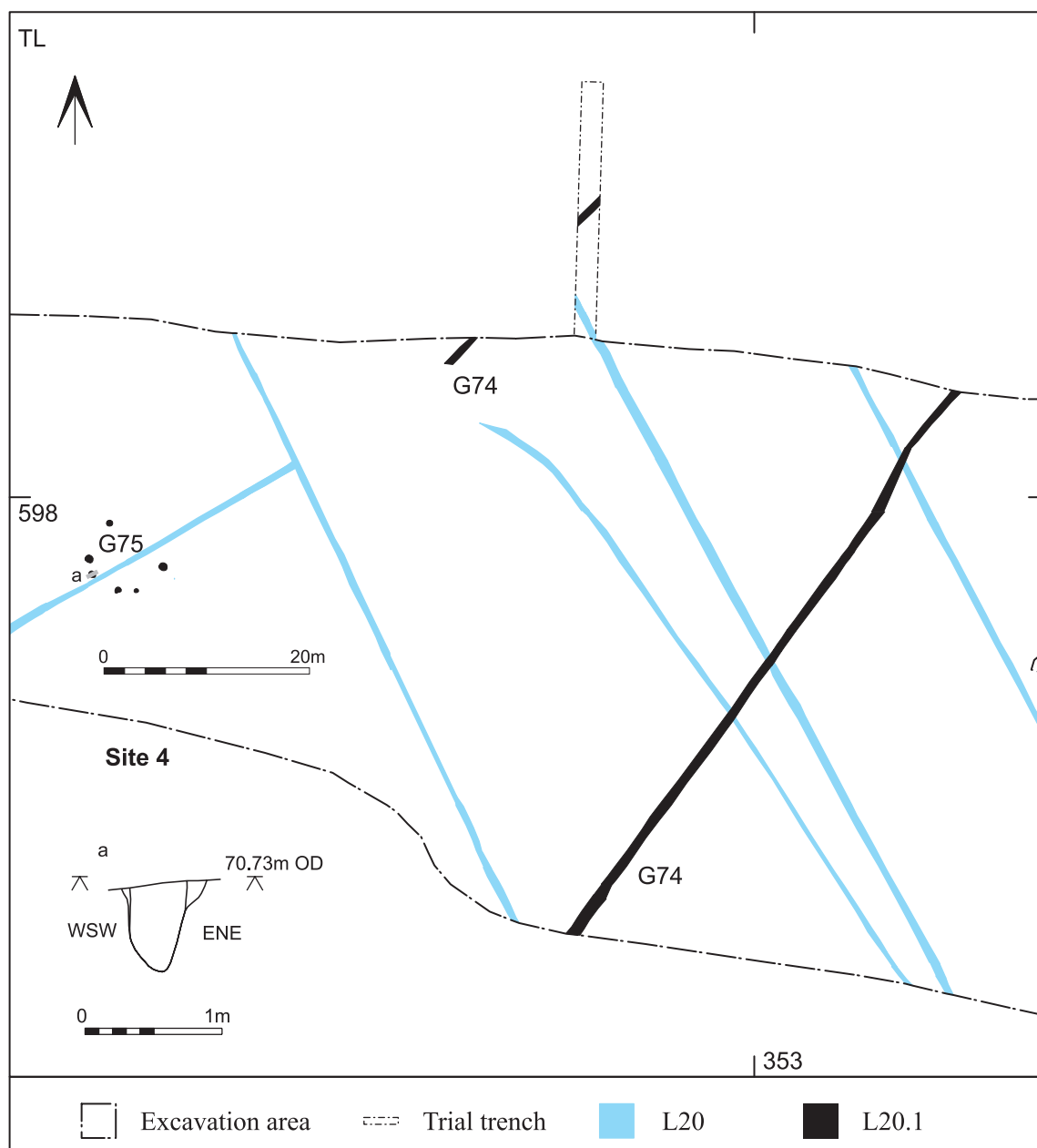


Figure 3.8 Childerley Chapel (Site 4): early–middle Roman field system G74 and building G75

North Sea. Contemporary settlement sites tended to be located in slightly more sheltered locations to the south of the ridge, *e.g.* Caldecote Highfields (Kenney 2007) and Cambourne (Wessex Archaeology 2003). This is not to say that the ridge was never inhabited: an Iron Age settlement had existed on the high ground at Knapwell Plantation (Wessex Archaeology 2003, 40–52) and a Roman settlement would subsequently be established at Childerley Gate (Site 5). It is entirely possible that future work in the area will reveal additional settlements.

The southern side of the ridge, at least, was used primarily as open pasture; parts of the ‘Celtic’ fields to the north were probably still under arable cultivation. The drove-ways at Scotland Farm (Site 7), Ash Plantation (Site 2) and Bourn Airfield (Site 3) all indicate that animals, whether cattle or sheep, were being moved around the area, which matches the evidence from Cambourne and Caldecote Highfields. This pattern of livestock

management would have helped to prevent over-grazing, the perennial problem of pastoralism (Campbell 1983, 133–48). The wet, clayey ground would also have quickly become churned up if animals, particularly cattle, were kept in the same place for too long. The drove-way at Ash Plantation led towards a brook to the north of the site, which would have been a useful source of water. The re-establishment of this drove-way slightly further east (Chapter 3.4.1) suggests this route retained its importance for a prolonged period of time.

Like the earlier Iron Age enclosure on this site (Chapter 2.3), the Bourn Airfield enclosures may have only been used on a temporary or seasonal basis. The small amount of artefactual material from them is likely to represent debris from temporary camps, set up by livestock herders. The small building at Childerley Chapel (Site 4) may have been used on the same basis. It was certainly constructed from substantial timbers, as shown

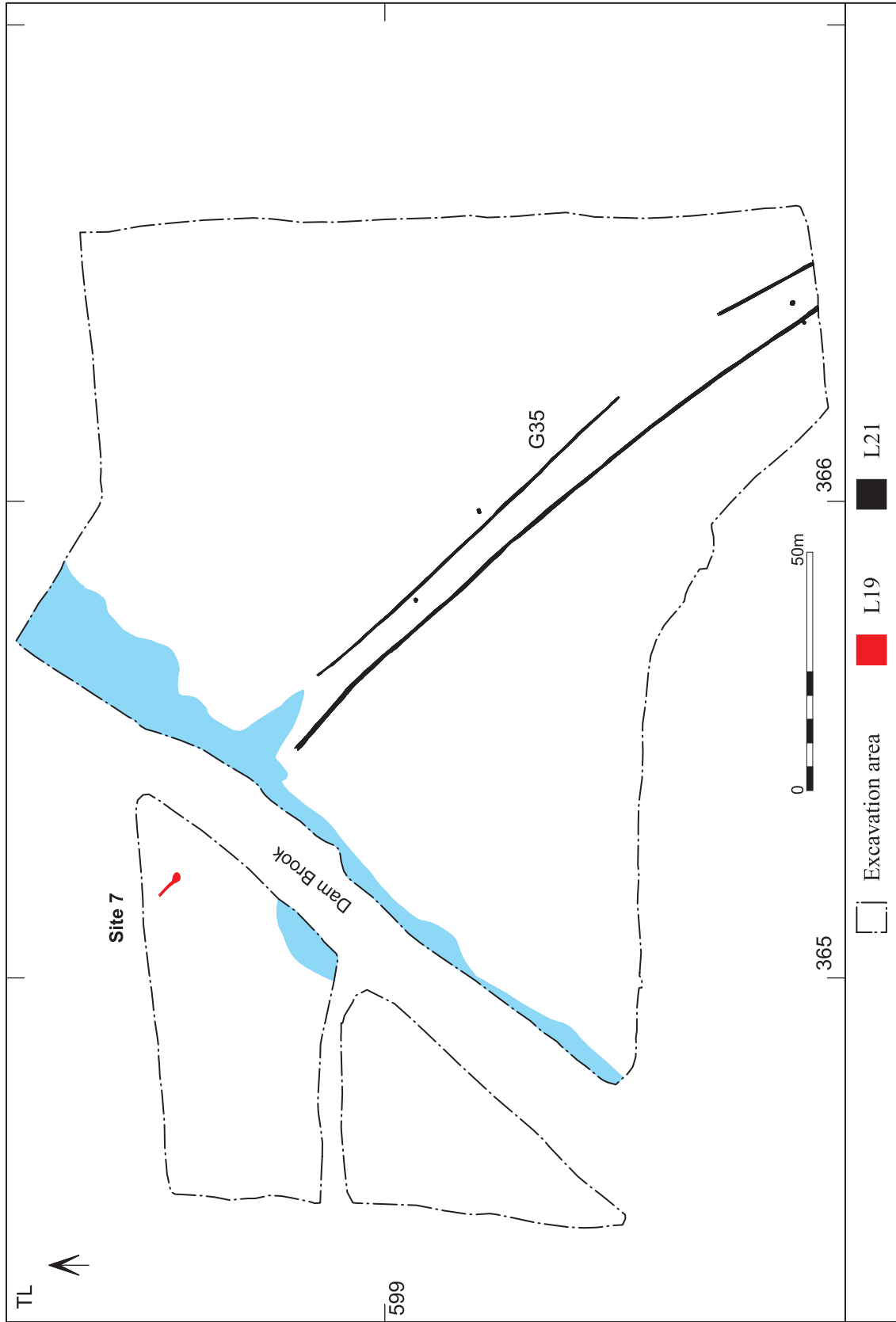


Figure 3.9 Scotland Farm (Site 7): early–middle Roman drove-way L21 and isolated late Roman features L19

by the size of the post-pipes, but the absence of artefacts or other contemporary features suggests it was not occupied on a regular basis.

The north–south alignment of the enclosures at Bourn Airfield and Camford Way (Site 10) follows neither the alignment of Ermine Street nor the predominantly NE–SW alignment of the local landscape. The A428 is believed to follow the approximate course of a ridgeway that continued in use throughout the Roman period (Chapter 3.1.1). These enclosures may have been perpendicular to, and linked by, such a feature.

The precise date of the drove-ways and enclosures at Bourn Airfield is uncertain. Although the pottery assemblage includes a sizeable proportion of Iron Age material, the greater volume of Roman pottery is a clear indication that they were in use in the Roman period. There was at least one Iron Age enclosure at Bourn Airfield and it is possible that the Iron Age pottery derived from disturbed, earlier features. However, it is also possible that the mixed assemblage is evidence that these enclosures and drove-ways remained in use for a considerable period, spanning the Iron Age / Roman transition.

### 3.4. Early to middle Roman farmstead at Ash Plantation (2nd–3rd centuries: Phase 3.3)

(Figs 3.4–3.5)

The Roman settlement at Ash Plantation (Site 2) was the earliest identified within the road scheme (Fig. 3.4). Its presence was already known from aerial photography, although only the northern half of the enclosure fell within the road scheme (Fig. 3.5). It was located on flat, relatively high ground, in the vicinity of a number of Iron Age and Roman farmsteads, revealed during excavations at Cambourne (Wessex Archaeology 2003). A hoard of Roman coins with a closing date of AD 170 is also known to have been found somewhere in this area (HER 03459). The source of the Elsworth Brook lies not far to the north, just the other side of the presumed course of Margary's Roman road no. 231 (Chapter 3.1.1).

#### 3.4.1. L10: establishment and occupation of enclosed farmstead at Ash Plantation (Site 2)

The enclosure that defined this farmstead was substantial. The excavated northern half alone covered an area of 2,100m<sup>2</sup>. Evidence of human occupation was uncovered within the enclosure, while contemporary drove-ways were revealed to the east of it.

A total of 4.375kg of pottery was recovered from the L10 deposits at Ash Plantation. The date range of the pottery suggests that the farmstead was occupied from the early or mid 2nd century until the mid 3rd century (Appendix 6.4.1, 6.5.33–37). The ecofactual evidence, however, is limited. Only thirty-four fragments of animal bone were identifiable to species (Albion Archaeology 2006, 106); they comprise small numbers of cattle, sheep or goat and horse. Charred plant remains include a moderate number of wheat glume bases from the primary fill of enclosure ditch SG184 and from rubbish deposit SG197.2, which also produced a similar quantity of cereal grains (Appendix 15, Table A45). Charcoal was similarly sparse and offers little insight into the local environment (Appendix 16.2.3).

The molluscan evidence is also poor. A column sample through the enclosure ditch produced significant numbers of the freshwater snail *A. leucostoma*, indicating the presence of standing water on an occasional or seasonal basis (Appendix 14, Table A44). The next most common taxon, representing only 7% of the assemblage, is *Trichia striolata*, which prefers moist, sheltered conditions.

#### *Ditches and eaves drip gully G40*

(Figs 3.4, 3.10)

The enclosure was defined by ditch SG184. It is possible that ditch SG188 represents an internal sub-division. However, it may simply have been part of the relatively elaborate arrangement of ditches, like SG189 to the south, which controlled the entrance to the enclosure (Figs 3.4 and 3.10).

On the east side of the enclosure, drove-way SG185 was parallel to the earlier drove-way G41, which had been blocked by the construction of the new farmstead. Like its predecessor, the drove-way led to the source of the Elsworth Brook to the north of the site. The northern half of the drove-way was only c. 4.5m wide but it doubled in width near the entrance to the enclosure. A roughly perpendicular offshoot was uncovered at the very eastern end of the site (SG186, Fig. 3.4). However, the junction of the two drove-ways was not revealed within the excavated area, and it is possible that the offshoot was actually related to the earlier drove-way.

The enclosure ditch was substantial, measuring up to 2.8m wide and 1m deep along its western and northern sides. Its lower profile was very steep-sided, giving way to a shallow step near the top of the ditch (Fig. 3.4, a). The eastern side of the enclosure ditch was significantly smaller, similar in size to the drove-way ditches at c. 0.7m wide and c. 0.4m deep (Fig. 3.4, b). This variation in size does not appear to be the result of plough truncation. It could suggest that the enclosure was appended to the pre-existing drove-way SG185. However, the two do appear to have been stratigraphically contemporary — there was an entrance from the drove-way into the enclosure — and it appears that the enclosure ditch was genuinely larger to the west and north.

The ditches that controlled access into the enclosure were only c. 0.6m wide and up to 0.2m deep (Fig. 3.10, b, c). Although the western half of SG188 was straight, it curved towards the entrance, like ditch SG189, with which it created a roughly circular area that was c. 8.5m in diameter. As well as the c. 3.5m wide entrance into this area from the drove-way, controlled by gatepost SG197 (see G42 below), there was another entrance of a similar width to the west, and also a narrower one to the north. Three nails were recovered from the infill of SG189.

The northern part of the enclosure contained an east-facing roundhouse (SG183, Fig. 3.10, a). No structural elements of the building itself were found, although the full length of its eaves drip gully survived. It had an internal diameter of 8.3m and its infill produced the remains of a copper alloy strap fitting (Appendix 3.3.1). This object may have been a folded buckle plate, with a rectangular slot accommodating the buckle pin, but it is too fragmentary for certain identification.

The pottery recovered from these features weighs a total of 1.556kg (Appendix 6.5.33). It came mostly from the roundhouse gully, the enclosure ditch and the southern entrance ditch. Nearly half of the assemblage comprises

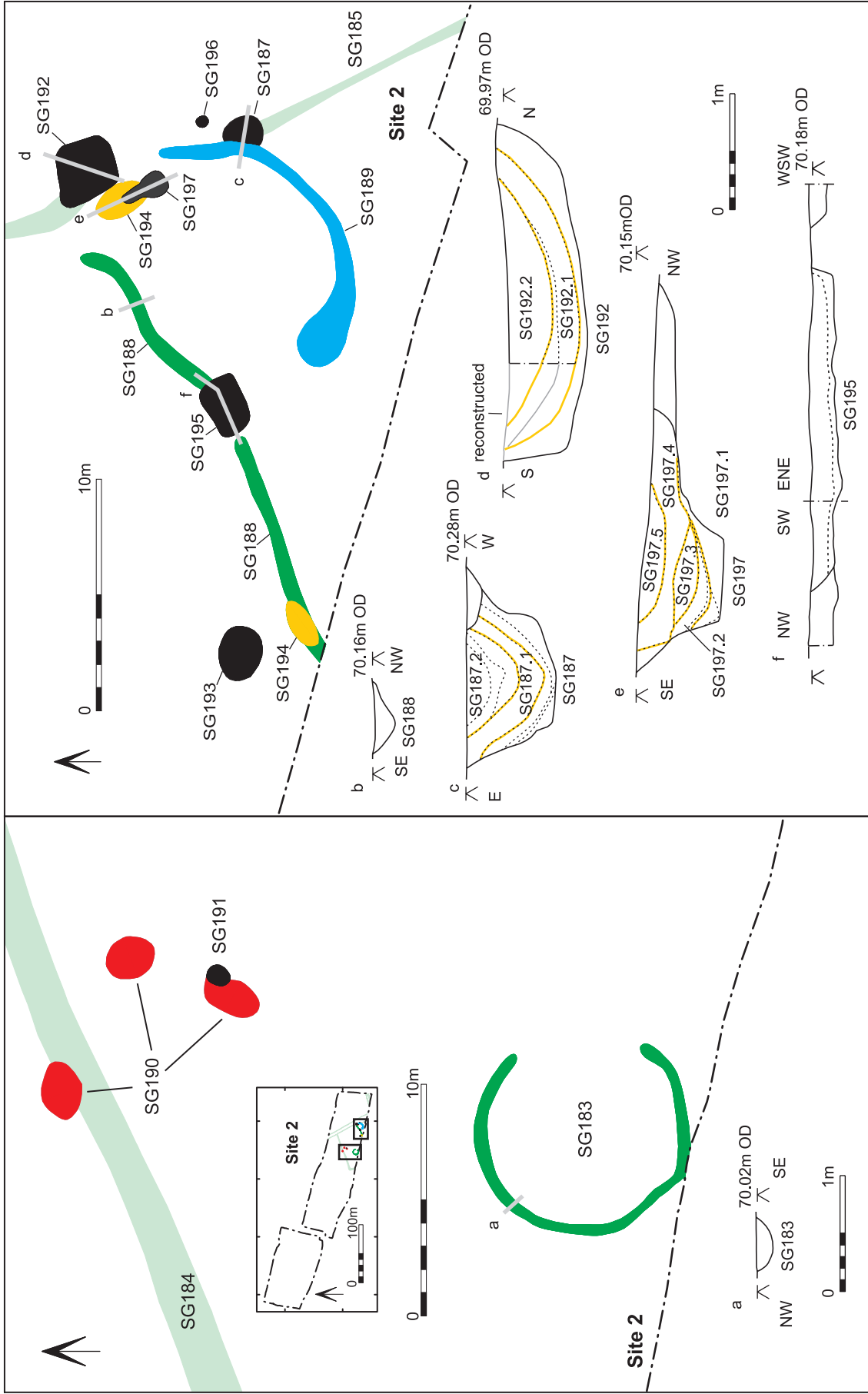


Figure 3.10 Ash Plantation (Site 2): remains of an entrance structure and domestic features within the middle Roman farmstead L10

Sandy grey wares; the only identifiable forms are a lid-seated, medium-mouthed jar and a wide-mouthed jar. A smaller amount of finer Sandy grey ware was also recovered, including a globular, neckless beaker and a cordoned, wide-mouthed jar. The assemblage contains no samian and few other fine wares; five tiny sherds may be from a Nene Valley colour-coat beaker. The secondary fills of the enclosure ditch SG184.2 also produced 319g of residual Iron Age pottery (Appendix 5, Table A15).

#### *Pits and post-holes G42*

(Figs 3.10–3.12)

A cluster of four pits was located to the north of the roundhouse, three within the enclosure and the fourth on its outer edge (Fig. 3.10). The infill of the three larger pits SG190 was relatively sterile, whilst the smaller pit SG191 produced twenty-four sherds of pottery, weighing a total of 222g. This includes a complete early South Gaulish Knorr 78 cup (Fig. 3.11, <P30>), most likely from La Graufesenque; it is panel-decorated with animal and human figures as well as plant motifs. The piece is typical of the careless, perhaps hurried, late South Gaulish (c. 90–110) production standards: the vessel walls are slightly irregular, as if the cup was removed from the mould before it was completely dry; and the small scalloped frieze which bounds the mould-decorated part becomes intermittent and disappears halfway round the vessel's circumference. This inferior standard of workmanship may be due to an increased pressure to boost production (Webster 1976, 78).

The remainder of the pits and post-holes were all clustered either at the entrance to the enclosure or along the ditches that controlled the entrance (Fig. 3.10). The

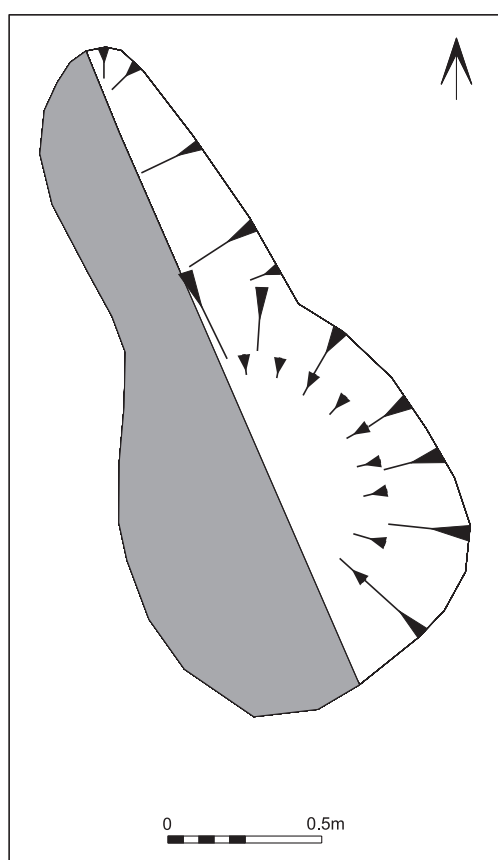


Figure 3.12 Ash Plantation (Site 2): Roman post-hole SG197

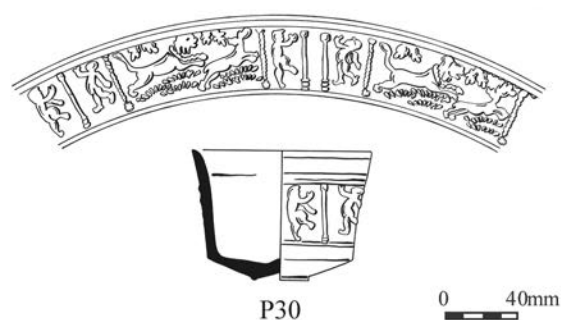


Figure 3.11 Ash Plantation (Site 2): South Gaulish Knorr 78 samian cup from middle Roman farmstead L10

largest pit SG192 was roughly square in shape and measured 2.6m wide and 0.7m deep, with nearly vertical sides (Fig. 3.10, d). A small amount of ferrous slag and a substantial sand-tempered fragment of brick, weighing 642g, were recovered from the lower half of its infill. Pit SG187, to the south, was 1.7m long, 1.5m wide and 0.8m deep (Fig. 3.10, c); its infill contained exactly 1kg of pottery and a nail shank. The other pits contained little artefactual material, despite the dark colour of their infill.

The two post-holes were very different to one another — SG196 was only small, whilst the core element of SG197 was 1m in diameter and 0.7m deep. Its sides were mostly almost vertical, although it splayed out slightly to the south-east, probably as a result of the post's extraction (Fig. 3.10, e and Fig. 3.12). In addition, there was a shallow shelf on its north-western side, which may have been used as a ramp to assist in lowering the post into the hole. The size of the hole suggests that the post may have been as much as 0.45m in diameter. The post-hole was located in the centre of the entrance to the enclosure and presumably held a substantial gatepost. Once the post had been extracted, the resultant hole was re-used as a rubbish pit. As well as 267g of pottery, the lower half of its infill also contained 250g of ferrous slag and a fragment of a nail shank.

The overall assemblage of pottery recovered from these pits and post-holes amounts to 229 sherds, weighing 2.465kg (Appendix 6.5.35–36). The assemblage is dominated by Sandy grey wares (with various inclusions), which account for more than 68% of the total. They were found in the form of medium-mouthed and wide-mouthed jars, a bowl, a lid, a globular beaker and a ring-necked flagon. One of the sherds has soot on its rim, while another is decorated with a burnished cross-hatch design, imitating Black Burnished ware. The standard and coarse varieties of Sandy oxidised ware and Nene Valley white ware are also present in moderate numbers, both as medium-mouthed jars and body sherds. In addition to the Knorr 78 cup, the assemblage contains a further ten sherds of samian, weighing 35g, which comprise 2nd-century vessels from central Gaul, including cup Dr 27 and dish/bowl Dr 18/31 or 31.

#### **3.4.2. L13: final occupation and abandonment of enclosed farmstead at Ash Plantation (Site 2)**

(Figs 3.4, 3.10)

Pottery recovered from deposits associated with the demise of the farmstead at Ash Plantation (G40.2 and G42.2) indicates that the farmstead went out of use in the



3rd century (Appendix 6.5.34/37). The effects of plough truncation have inevitably meant that few of the deposits that formed in the final stages of the farmstead's life survived. Their presence was only recorded in the three deepest features — enclosure ditch SG184, pit SG192 and post-hole SG197 — and in the drove-way ditches SG185 to the east of the farmstead (Figs 3.4 and 3.10).

The pottery assemblage weighs 1.88kg in total, two-thirds of which came from the uppermost backfill SG197.4 of the converted post-hole, including 924g from an almost complete Nene Valley grey ware jar. This deposit also contained two nails and a number of large stones, which suggest that it probably served as a capping layer. The remainder of the pottery assemblage comprises mostly Sandy grey wares (with various inclusions), represented by wide-mouthed jars and a flanged bowl. Fragments of a Sandy reduced ware, wide-mouthed jar and an Oxfordshire parchment ware medium-mouthed jar were also recovered, along with two fairly substantial sherds of Nene Valley white ware. Samian was the only fine ware recovered, comprising ten sherds, which weigh 190g. Eight of these sherds, weighing 188g, constitute an almost complete Central Gaulish 2nd-century dish (Dr 31).

Although little animal bone was recovered, and the molluscan evidence merely repeats the dominance of *A. leucostoma* that was seen in the occupation phase of the farmstead (Appendix 14, Table A44), a much larger quantity of charred plant remains was retrieved. This came mainly from the upper deposit SG198.1 within drove-way SG185, where the infill of the ditch had been disturbed by root action (Fig. 3.4). It produced an exceptionally large quantity of material, with an estimated density of more than 500 items per litre of soil. The quantified material is dominated by chaff, which accounts for 82% of the total, while the remainder is nearly all cereal grain. Grain preservation is poor but virtually all the identifiable grains are wheat. A few emmer grains were identified, but most are likely to be spelt, a supposition supported by the presence of very large amounts of spelt chaff, which is better preserved. A relatively large assemblage also came from SG197.4, which produced a modest amount of grain, as did the sample taken from lower down in the feature, and 232 chaff fragments (Appendix 15, Table A45).

### **3.4.3. Discussion: Ash Plantation (Site 2) farmstead (Phase 3.3)**

(Figs 3.4–3.5, 3.10)

Aside from the problems caused by plough truncation, there are two main difficulties in assessing the function and longevity of the farmstead at Ash Plantation. The first is the relative lack of ecofactual evidence: the animal bone assemblage is little more than negligible, and the charcoal and molluscan assemblages offer little insight into the local environment. Secondly, only half of the enclosure was excavated, although the presence of a roundhouse and the cluster of features near the entrance does suggest that this included at least part of the core of the farmstead.

The limited available data do suggest that local environmental conditions were similar to those observed on the other sites within the road scheme and at nearby Lower Cambourne (Wessex Archaeology 2003, 31). The farmstead was surrounded by open grassland with well-vegetated ditches. Hedgerows and clumps of trees

were probably present nearby, as they are today, but the area is unlikely to have been heavily wooded. The dominance of *A. leucostoma* and the nature of the underlying boulder clay make it likely that the ground was damp, though standing water was probably confined to the ditches. The presence of root disturbance in the ditches that defined drove-way SG185, along with a small number of tree-throw holes, suggests that the area was allowed to revert to scrub once the farmstead was no longer in use.

Despite the paucity of animal bones recovered during the excavation, pasture is almost certain to have played an important part in the farmstead's economy. This is most obviously manifested by the fact that drove-way SG185 formed an integral part of the farmstead (Fig. 3.4); indeed, the enclosure is situated in an area that was criss-crossed by drove-ways (see Chapter 3.1.1). A more circumstantial indicator of the importance of animals is the elaborate arrangement of ditches at the entrance between the enclosure and the drove-way (Fig. 3.10). It has been observed that such complexity is generally associated with the management of animals (Mackreth 1996, 221).

With the enclosure apparently partitioned, the entrance ditches would have allowed separate access into its northern and southern halves, with the circular area between the ditches perhaps acting as a temporary holding pen. The entrance into the northern half, where the roundhouse was located, was much narrower than that into the southern half, which needed a wider entrance for herding animals. This does, of course, assume that the roundhouse was used for domestic purposes, whereas it could equally have been a storehouse. Little domestic refuse was recovered from its immediate vicinity, although this might be due to its location at the very edge of the excavated area.

The presence of a roundhouse on a Roman farmstead that was established in the 2nd century is not unusual. Roundhouses were also identified on Roman sites at the North Caxton Bypass, Lower Cambourne and The Grange (Wessex Archaeology 2003, 9, 16, 81), all within 3km of Ash Plantation. The use of circular buildings during the Roman period represents the continuation of native Iron Age traditions — the underlying survival of native building styles can be seen even in some of the most Romanised parts of Britain (Blake 2000, 7–11) — and their presence in the Bourn Valley is further evidence of this area's slow response to this aspect of Roman culture.

Post-hole SG197 is a particularly intriguing feature due to its size. Its location in the entrance to the enclosure suggests that it held a gatepost that controlled access, yet the reason why such a large post was needed is far from obvious. The backfill of the post-hole contained three nails, and four more were recovered from nearby. They represent the entire assemblage of nails from the farmstead and may indicate the presence of a gateway structure, rather than a simple gate. If the farmstead had such an embellishment, it suggests that its status may have been higher than is otherwise apparent from the excavated sample.

The entrance area was also a focus for the construction of pits. No environmental evidence survives to provide a conclusive explanation of their function, yet their regular shapes, especially those of SG192 and SG195 (Fig. 3.10), suggest that they were used for storage. Only post-hole SG197 offers clear evidence for re-use as a rubbish pit, although a significant amount of pottery was also

recovered from pits SG187 and SG192. It is also unclear whether these pits relate to activities associated with the excavated roundhouse, or whether their location is due to something beyond the southern limit of excavation.

There is little evidence for what activities took place within the farmstead. A moderate amount of ferrous slag was recovered from post-hole SG197 but this is no more than an indication of low level craft activity (Appendix 3.3.1). There is also limited evidence for crop processing: the two largest deposits of charred plant remains have an approximate chaff to grain ratio of 5:1, which suggests that they derive from the final stages of crop processing, when the hulled wheat was de-husked before cooking or milling. The difference in preservation levels between the chaff and the grain perhaps suggests that they were burnt separately, the chaff during de-husking and the grain as the result of a cooking accident, before subsequently being merged during disposal (Appendix 15.3.3).

The overall impression from the relatively small amount of artefacts recovered is that the farmstead was a low-status settlement, used either not intensively or only for a short time. The former explanation is perhaps more likely, as the pottery assemblage suggests that the farmstead was occupied, or at least used, from the first half of the 2nd century into the 3rd century. This matches the date range of the nearby Roman sites at Mill Farm and The Grange (Wessex Archaeology 2003), both of which produced a pottery assemblage that was dominated by coarse, locally produced sandy wares.

The pottery assemblage contains a greater variety of Sandy grey wares than those from the settlements at Bourn Airfield (Site 3) and Childerley Gate (Site 5), which suggests that they belong to the earlier part of the 2nd century, before the production of these vessels became more standardised (Appendix 6.4.1). As with the nearby sites at Mill Farm and The Grange, the later Roman Nene Valley colour-coats are barely represented in the assemblage. This suggests that the farmstead had gone into decline by the start of the 3rd century, though the presence of 3rd-century pottery does at least indicate some degree of continued activity here.

The predominance of locally made pottery suggests that the farmstead's economy was based primarily on local trading links. This does not necessarily mean, however, that the people who lived here were unacquainted with the wider area. The alignment of drove-way SG185 took it roughly in the direction of the Elsworth Brook to the north of the site (Fig. 3.5). This brook is a tributary of the River Great Ouse, joining it between the villages of Swavesey and Holywell about six miles away; however, there is no evidence that links were established with the wider river system.

Although the pottery assemblage from Ash Plantation contains a higher proportion of samian than that from Bourn Airfield or Childerley Gate, the small amount recovered, and the complete absence of amphorae, suggests that the farmstead was less affluent than those at Lower Cambourne and Jeavons Lane (Wessex Archaeology 2003). The presence of samian, which was being imported when the farmstead was in use, does at least suggest domestic activity within the enclosure. However, any conclusions about this farmstead must be tempered by the fact that only part of it was excavated; only further excavation could remove this uncertainty.

### **3.5. Early to middle Roman ladder system at Childerley Gate (2nd–3rd centuries: Phase 3.3)** (Fig. 3.13)

While the farmstead at Ash Plantation was still in use, another settlement was established *c.* 2.5km to the east at Childerley Gate (Site 5). It was previously unknown and was discovered during evaluation work on a crop-mark that had been erroneously interpreted as a round barrow (NMR: OS/78132 FR.28 21 AUG 78).

The full extent of this linear settlement is unknown, as it continued beyond the excavated area to the north-east and the south-west (Fig. 3.13). It took the form of a ladder system, a type of monument that is best known from East Yorkshire (Halkon and Millett 1999, 229) but which is also found in this area (*cf.* Jeavons Lane, Wessex Archaeology 2003, 53–66). The part of the ladder system that was investigated comprised two enclosures (G4 and G5), which were connected by a series of small, rectilinear fields (G3), the south-western end of which was subsequently re-worked (G6).

The Phase 3.3 animal bone assemblage from the ladder system is relatively small when compared with those from later phases. It comprises only seventy-six bones, of which cattle account for more than 65%. The representation of sheep or goats is particularly low, with only nine bones recovered; their poor level of preservation may account for the bias in favour of the larger, more robust cattle remains. A small number of bones attest to the presence of horses, dogs and pigs, with an unfused first phalange from the infill of G3 indicating the presence of foals below the age of 1.25 years old (Appendix 13, Table A43).

#### **3.5.1. L11: livestock enclosure at Childerley Gate (Site 5)** (Figs 3.13–3.14)

Enclosure G2, which represents the earliest evidence of human activity at Childerley Gate (Fig. 3.13), was badly truncated by ploughing. Its south-western side was defined by a ditch that only survived in short lengths; the ditch on its north-eastern side was no more than 0.2m deep and may originally have extended further to the north-west. As they survive, the two ditches suggest that the enclosure was *c.* 30m long, although no trace of a ditch at either end was found.

A total of five small pits were associated with this enclosure. Four clustered on the north-eastern side of the enclosure (SG16); the fifth was in line with the south-western ditch. Ten sherds of pottery were recovered from the southernmost pit in SG16 (Fig. 3.14, j), apparently dating its infill to the 3rd century. This is significantly later than the 2nd-century date proposed for the construction of the enclosure, and implies that it had a relatively long lifespan. Its north-western end was subsequently cut by enclosure G4 when ladder system L12 was constructed, but the date of the pottery suggests that at least part of it remained in use.

#### **3.5.2. L12: establishment of ladder system at Childerley Gate (Site 5)** (Figs 3.13–3.16)

Although Roman activity at Childerley Gate began with enclosure L11, or perhaps even earlier (*cf.* Chapter 3.5.4), intensive use of the site only started with the construction of ladder system L12 (Fig. 3.13). This comprised a linear

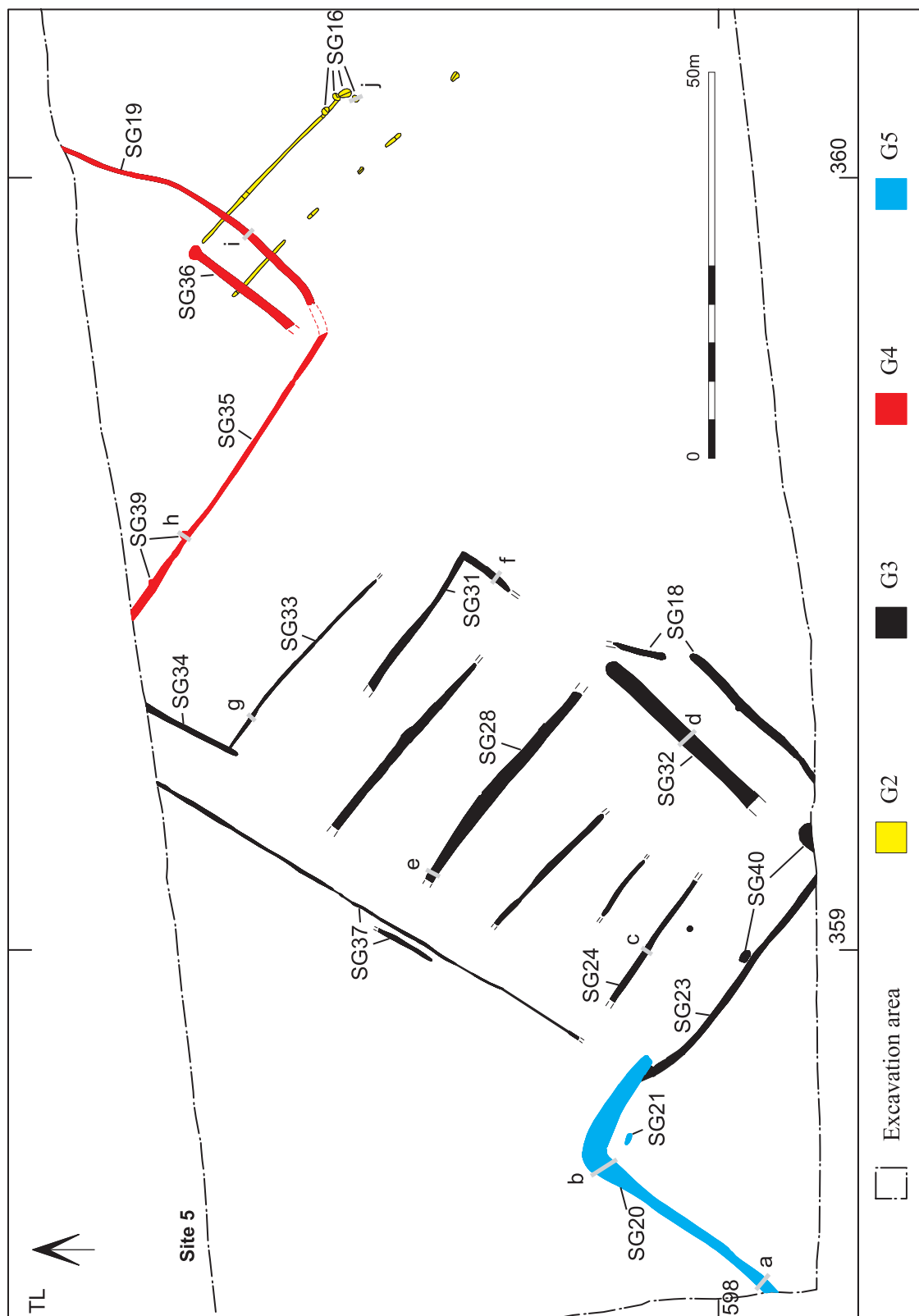


Figure 3.13 Childerley Gate (Site 5): middle Roman ladder system L12

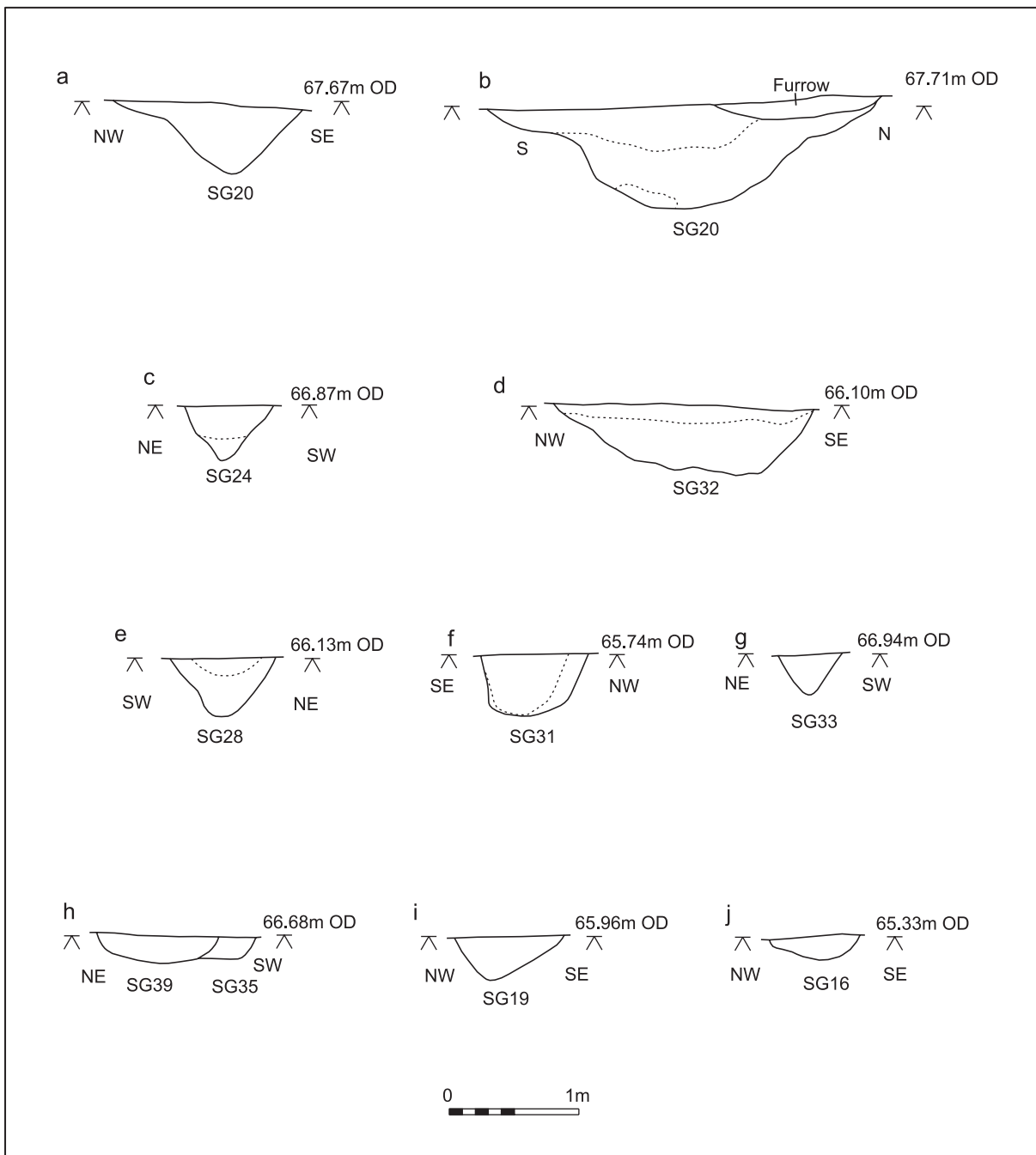


Figure 3.14 Selected section drawings to accompany Figure 3.13

series of narrow, rectilinear fields G3 with a trackway on at least one side, which formed a link between two larger enclosures to the north-east and south-west (G4 and G5). The regularity of its layout suggests that the entire ladder system was set out in a single undertaking.

Due to plough truncation, some of the ditches only survived for part of their original length. The degree of erosion is well illustrated by the funerary remains: grave SG21 was badly disturbed (Fig. 3.15) and three fragments of disarticulated human bone were also recovered (Appendix 12.3.2). The western pit in SG40 produced the left femoral shaft of an adult, possibly male, while the south-western edge of enclosure G4 produced the left proximal tibial shaft and a fragment of a fibula shaft from an adult. Ditch SG26 (Fig. 3.16) also contained the left

proximal and a mid-tibial shaft from an adult, along with miscellaneous fragments of cortical bone. It is possible that these bones were placed deliberately following excarnation, as was the case on the Iron Age farmstead at Scotland Farm (Chapter 2.2.5). However, the presence of inhumations on the site, combined with the locations at which these fragments were found in relation to the medieval furrows, suggests that medieval ploughing is more likely to have been the cause of their disarticulation.

#### *Fields and trackway G3*

(Figs 3.13–3.14, 3.16)

At least six individual fields on a NE–SW alignment linked enclosures G4 and G5 (Fig. 3.13). The ends of the block of fields were respectively defined by ditches SG31

and SG23. A seventh field may have existed to the north-east (defined by ditch SG33) but truncation has made it difficult to determine the fields' original layout here. Ploughing had also completely destroyed parts of the ditches demarcating the individual fields. Even the largest (SG28) was no more than 0.4m deep, while some barely survived at all (Fig. 3.14, c–g). Four pits were present in the southern corner of G3: three were only small- to medium-sized, but the easternmost pit in SG40 was relatively large. Its full dimensions could not be ascertained, as it was cut by later ditches and lay partially beyond the limit of excavation.

The south-eastern edge of the block of fields was defined by ditches SG31 and SG32. The latter also formed one side of what appears to have been a drove-way; its other side was defined by ditch SG18. This probable drove-way was c. 6.5m wide, with a 3m-wide entrance. Its relationship with the fields is obscured by later ditches, while its junction with the enclosure to the south lay beyond the excavated area. If it was a drove-way, then it had a relatively short lifespan, as it was blocked by later re-working of this end of the block of fields (SG25, Fig. 3.16).

In contrast, the trackway along the north-western edge of the field system appears to have remained in use for a much longer time — its western ditch SG37 was re-cut. The other side of the trackway was partly defined by ditch SG34, giving it a width of c. 7m. It is unclear whether this ditch originally continued further to the south-west, forming the north-western boundary of the block of fields. It may have been completely truncated by ploughing, as SG37 had been for much of its length, or by a later, much larger ditch (Chapter 4.3.1, SG85). Alternatively, this side of the fields may have been left open to facilitate access to the trackway.

The dimensions of the individual fields emphasise their overall regularity. The field at the south-western end, between ditches SG23 and SG24, was c. 11m wide. The next two fields were c. 7.5m wide, followed by two more that were c. 11m wide, and then another two that were again c. 7.5m wide. It is not inconceivable that another ditch, completely truncated by ploughing, once lay between ditch SG33 and the enclosure to the north-east of the system, thereby creating another two fields that were c. 11m wide.

The artefact assemblage from these ditches was relatively small. The 1.129kg of pottery is dominated by 674g from a single Nene Valley coarse white ware vessel from ditch SG23 (Appendix 6.5.2). This medium-mouthed jar is late 2nd- to early 3rd-century in date. The remainder of the assemblage comprises mostly Sandy grey wares with a variety of inclusions, and includes a medium-mouthed jar with an everted rim. Three sherds from the infill of ditches SG18, SG27 and SG31 had been misfired; this might suggest that a kiln was in production nearby, although it is possible that the sherds were from seconds rather than wasters.

The few non-ceramic artefacts include two Roman coins: a *sestertius* dating to 161 from ditch SG33 and a late 3rd-century barbarous radiate from ditch SG28 (Appendix 2, Table A5). The radiate may have been intrusive, as the pit that contained the Childerley Gate coin hoard (Chapter 4.3.2) was dug into the infill of this ditch. Ditch SG18 also contained 510g of a ferrous smithing-

hearth bottom, which was the only indicator of craft activity (Appendix 3.3.3).

The charred plant remains recovered from the infill of ditch SG31 represent the fifth largest individual assemblage produced by the thirty-eight soil samples taken at Childerley Gate (Appendix 15, Table A47). However, the density of quantified items is still only 3.6 per litre of processed soil. The majority comprise chaff fragments, with spelt wheat (*Triticum spelta*) positively identified. Only two cereal grains and an unquantified number of grain fragments are present, none of which are identifiable to species.

#### Enclosure G4 (Figs 3.13–3.14)

Enclosure G4 was located at the north-eastern end of the block of fields (Fig. 3.13). Only its southern corner fell within the excavated area. It was defined by ditches SG19 and SG35 with a possible internal drove-way, formed by ditch SG36, which mirrored the drove-way on the south-eastern side of the fields. Unfortunately, the relationship between these three ditches was destroyed by later features. Two small, shallow pits SG39 along the south-western side of the enclosure were the only surviving internal features.

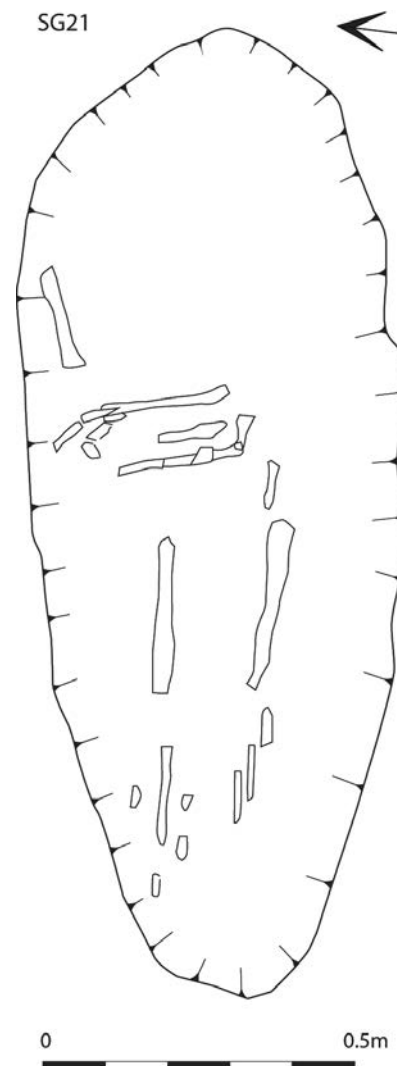


Figure 3.15 Childerley Gate (Site 5): partially ploughed-out Roman grave from enclosure G5

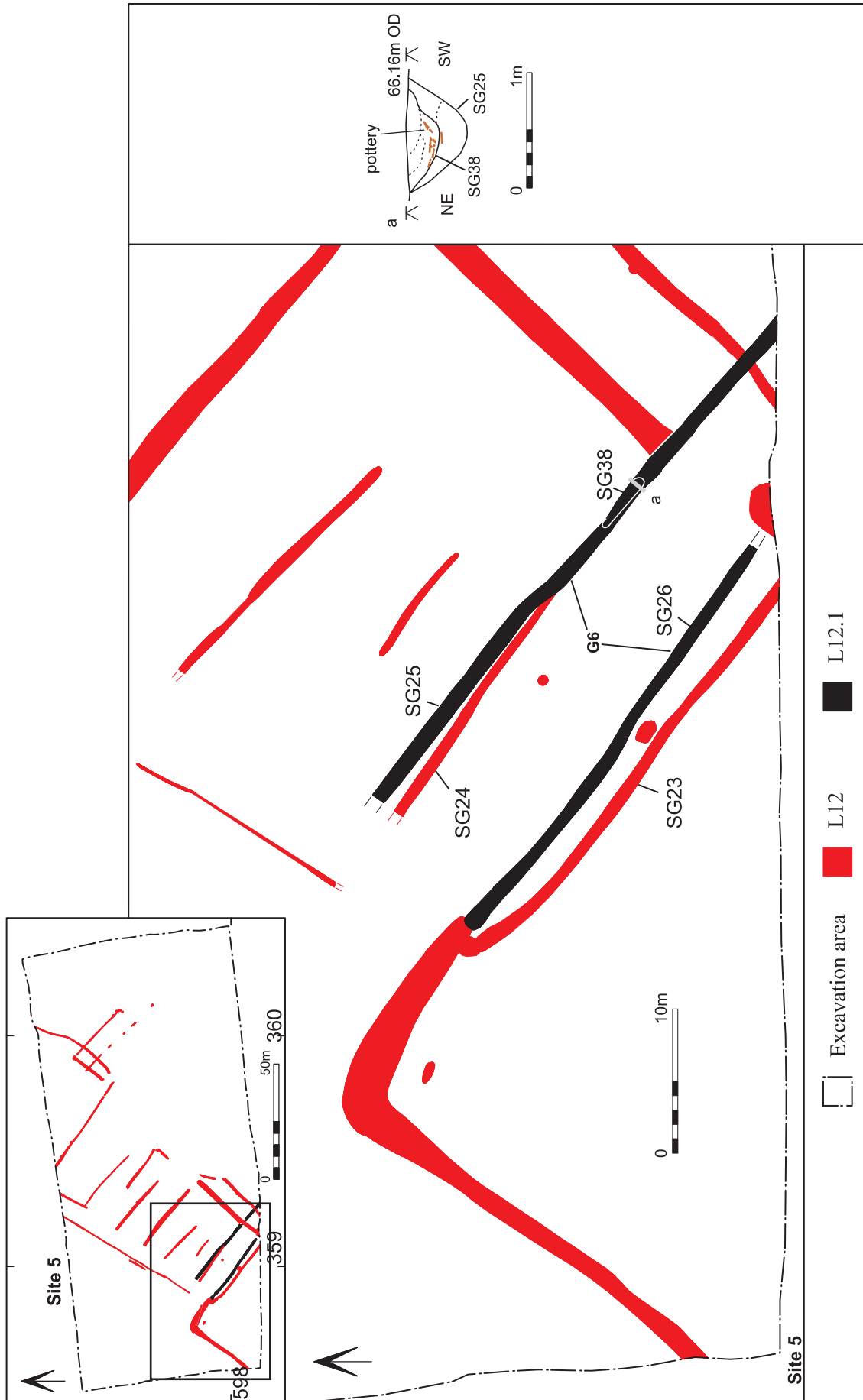


Figure 3.16 Childerley Gate (Site 5): re-instatement of field boundaries within middle Roman ladder system L12

The three ditches were all similar in size, measuring up to 1m wide and 0.3–0.4m deep (Fig. 3.14, h–i). The one exception was the north-eastern terminal of SG36, which was 1.8m wide and 0.5m deep. The enlargement of this terminal suggests that it was used as a sump, although the base of the ditch showed no appreciable downward slope towards it.

The artefact assemblage from these features comprises 627g of Roman pottery (Appendix 6.5.3). Sandy grey ware predominates but no vessel types could be identified. A badly bubbled waster sherd was recovered from the infill of ditch SG19. The assemblage also includes 136g of fine Sandy reduced ware in the form of a medium-mouthed jar.

#### *Enclosure G5*

(Figs 3.13–3.15, 3.17)

Enclosure G5 was located at the south-western end of the block of fields (Fig. 3.13). Only its northern corner fell within the excavated area. It was principally defined by ditch SG20, although the adjacent field ditch SG23 also formed part of its north-eastern side. This part of the site had suffered particularly severe plough truncation; grave SG21 was the only internal feature identified within the enclosure.

Ditch SG20 varied considerably in size along its length. Although, for the most part, it was *c.* 1.3m wide and *c.* 0.5m deep, with a roughly V-shaped profile, its northern corner splayed out to 3m wide and 0.8m deep (Fig. 3.14, a–b). No evidence of re-cutting was visible, but the ditch did survive to define the edge of a Phase 4 enclosure (Chapter 4.3.2). Its increase in size may simply have been the result of weathering, combined with repeated cleaning-out, over this period.

Grave SG21 was located in the northern corner of the enclosure, on a roughly east-west alignment (Fig. 3.15). Such a location is not uncommon; other Cambridgeshire examples include the settlement at Orton Longueville (Mackreth 2001; Appendix 12.4) and a later phase of the Childerley Gate farmstead itself (Chapter 4.3.2). Little of the grave had survived plough damage. It was 0.6m wide and at least 1.55m long. Only the right arm and hand and parts of the legs survived (Appendix 12.3.2). They were of an adult, possibly male, buried in a supine position facing east. No grave goods were found in association with the body; sampling of the grave's backfill showed it to be sterile.

The infill of the ditch was also mostly sterile. However, its dark, primary deposit SG20.1, which was confined to the corner of the enclosure, produced 313 sherds of



Figure 3.17 Childerley Gate (Site 5): selection of perforated vessels from the Phase 3.3 middle Roman farmstead



Figure 3.18 Childerley Gate (Site 5): pottery dump G6.2 during excavation. Scale 0.4m

Roman pottery, weighing 3.83kg (Appendix 6.5.4). This group of late 2nd-century vessels were almost certainly deposited in one event and, despite being made from different fabrics, may all have had a similar function. The most common fabric is a fine Sandy reduced ware with flint, calciferous and iron fleck inclusions, which accounts for 2.234kg. At least five medium-mouthed jars with a rolled rim and grooves on the neck and shoulder can be identified in this fabric. One is handmade; the remainder are wheel-made. Two of the vessels have post-firing holes drilled through their bases; another displays partially drilled holes (Fig. 3.17, <P32>).

Two medium-mouthed jars in a Sandy grey ware fabric were also recovered. Their combined weight is 919g; the thick sherds are not typical of the finer wares that generally characterise Sandy grey ware production in the region. One vessel has post-firing holes drilled in its base (Fig. 3.17, <P33>); the other base sherd is very thick and spalled. Although its centre has been removed, it is not clear whether this was a deliberate act or the result of faulty production. A more definite waster, in the form of a lid-seated, medium-mouthed jar in a Sandy grey ware fabric with calciferous inclusions, is again suggestive of nearby pottery manufacture. This vessel also bears the impression of a cereal grain, indicating that it was dried in the vicinity of processed crops. However, the ditch produced only a negligible amount of charred plant remains. Several sherds of Black-surfaced red ware, which are often the result of incomplete firing, again hint at pottery production in the vicinity.

The remainder of the assemblage includes a small, Sandy oxidised ware bead and flange mortarium, a type which became popular at the end of the 2nd century and continued in use into the 3rd century.

### 3.5.3. L12.1: re-modelling of ladder system at Childerley Gate (Site 5)

(Fig. 3.16)

The Childerley Gate ladder system gradually evolved from its original layout. Certain elements were abandoned but much of its initial form was still recognisable up to 200 years after its creation when a number of the ditches were re-cut (Phase 4, Chapter 4.3.1). Prior to that major re-modelling, a number of less extensive changes were made, including the re-definition of the junction between the southern enclosure and the block of fields (Fig. 3.16). A significant aspect of these changes was the deposition of a large quantity of Roman pottery in the top of one of the re-cut ditches.

#### Re-cut ditches G6

(Fig. 3.16)

The two ditches at the south-western end of the block of fields were re-cut as SG25 and SG26 (Fig. 3.16). Ditch

<i>Fabric</i>	<i>Weight (g)</i>	<i>Jar</i>	<i>Narrow-mouthed jar</i>	<i>Medium-mouthed jar</i>	<i>Wide-mouthed jar</i>	<i>Base only</i>
Sandy grey ware	4,160			2	3	
Sandy grey ware — flint	3,415			✓	1	1
Sandy grey ware — calc/mica	1,080			✓		
Sandy grey ware — coarse	975			✓		1
Sandy grey ware — fine	613	✓		✓		1
Sandy grey ware — grog	400				✓	
Sandy grey ware — mica	8					
Sandy reduced ware	2,554		1		1	1
Sandy reduced ware — grog	1,401			1		
Sandy reduced ware — fine	613		1	✓		
Sandy reduced ware — mica	570				1	
Sandy oxidised ware	25		✓			
Sandy oxidised ware — grog	744					1
Shelly ware	527			1		
Other	1,077					
<b>Total</b>	<b>18,162</b>		<b>2</b>	<b>4</b>	<b>6</b>	<b>5</b>

Table 5 Pottery dump G6.2 – quantities of perforated pots by fabric and vessel form  
✓ = form present but unperforated



SG25 followed roughly the same line as its predecessor but was slightly larger (Fig. 3.16, a). To the south-east, it extended further than the earlier ditch, cutting across the drove-way on the side of the field system and continuing beyond the limit of excavation. Ditch SG26 was similar in size to its predecessor but was located slightly further to the north-east.

The primary deposits within the re-cut ditches contained a relatively large amount of pottery (Appendix 6.5.6–7). However, the majority came from the same part of ditch SG25 as pottery dump G6.2. It includes 200g of Shell-tempered pottery, with a base sherd pierced by three post-firing holes. This is likely to be part of a vessel from the overlying pottery dump, suggesting that it is intrusive within the primary deposits. The primary deposits in the

other ditch produced 586g of pottery, including three Sandy grey ware jars and a base with five post-firing holes (Fig. 3.17, <P35>).

*Pottery dump G6.2*

(Figs 3.16–3.21)

A c. 3m length of ditch SG25 contained a large deposit of pottery (SG38, Figs 3.16 and 3.18). It is unclear whether the pottery was simply deposited within the infill of the ditch, or whether a length of the ditch had been deliberately re-cut to receive it. The apparent mixing of vessels between this deposit and the primary infill of SG25 suggests that it was simply deposited in the top of the partly infilled ditch.

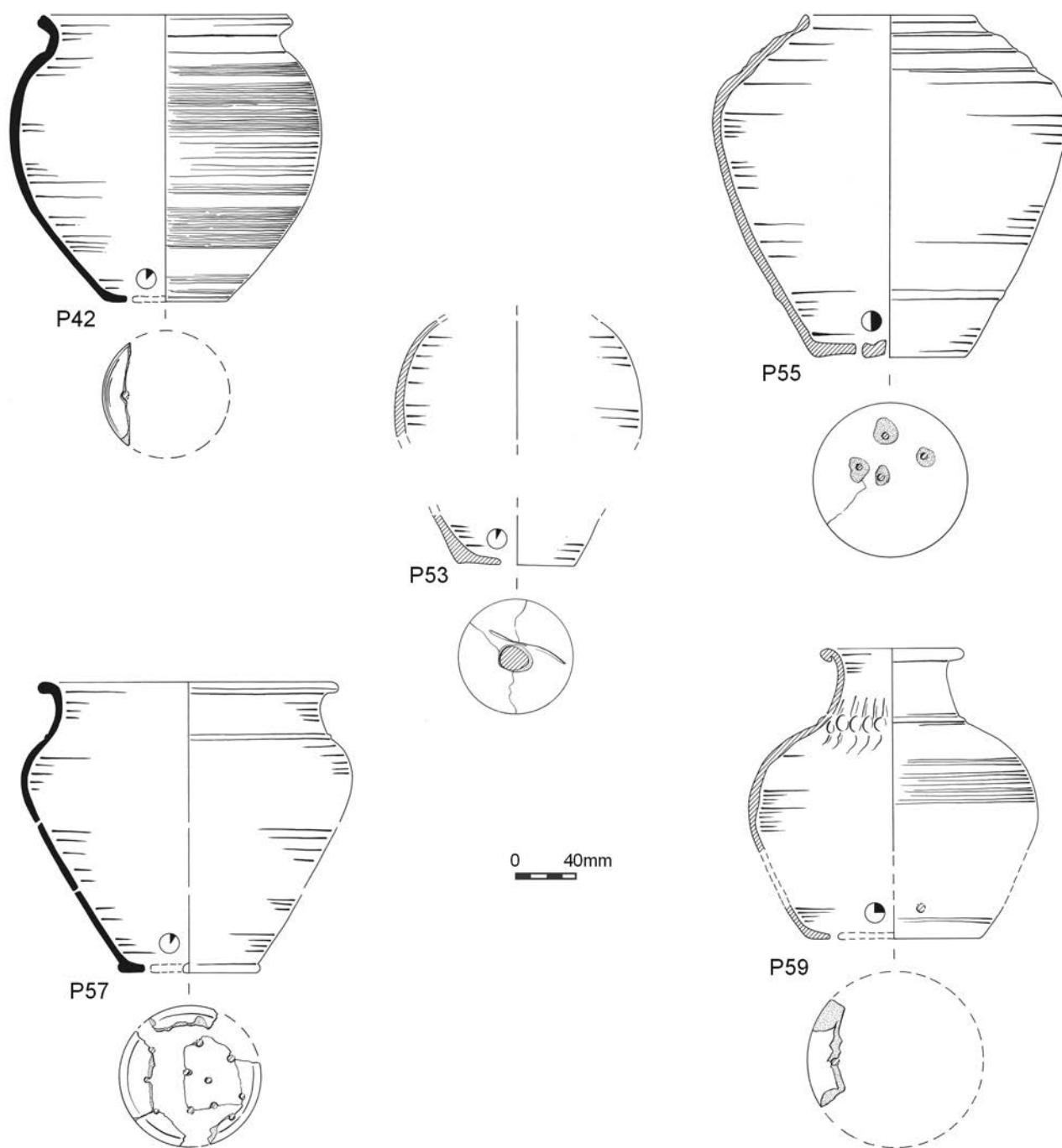


Figure 3.19 Childerley Gate (Site 5): pottery from G6.2. Sandy grey ware jar P42, coarse Sandy grey ware vessel P53 and Sandy reduced ware jars P55, P57 and P59

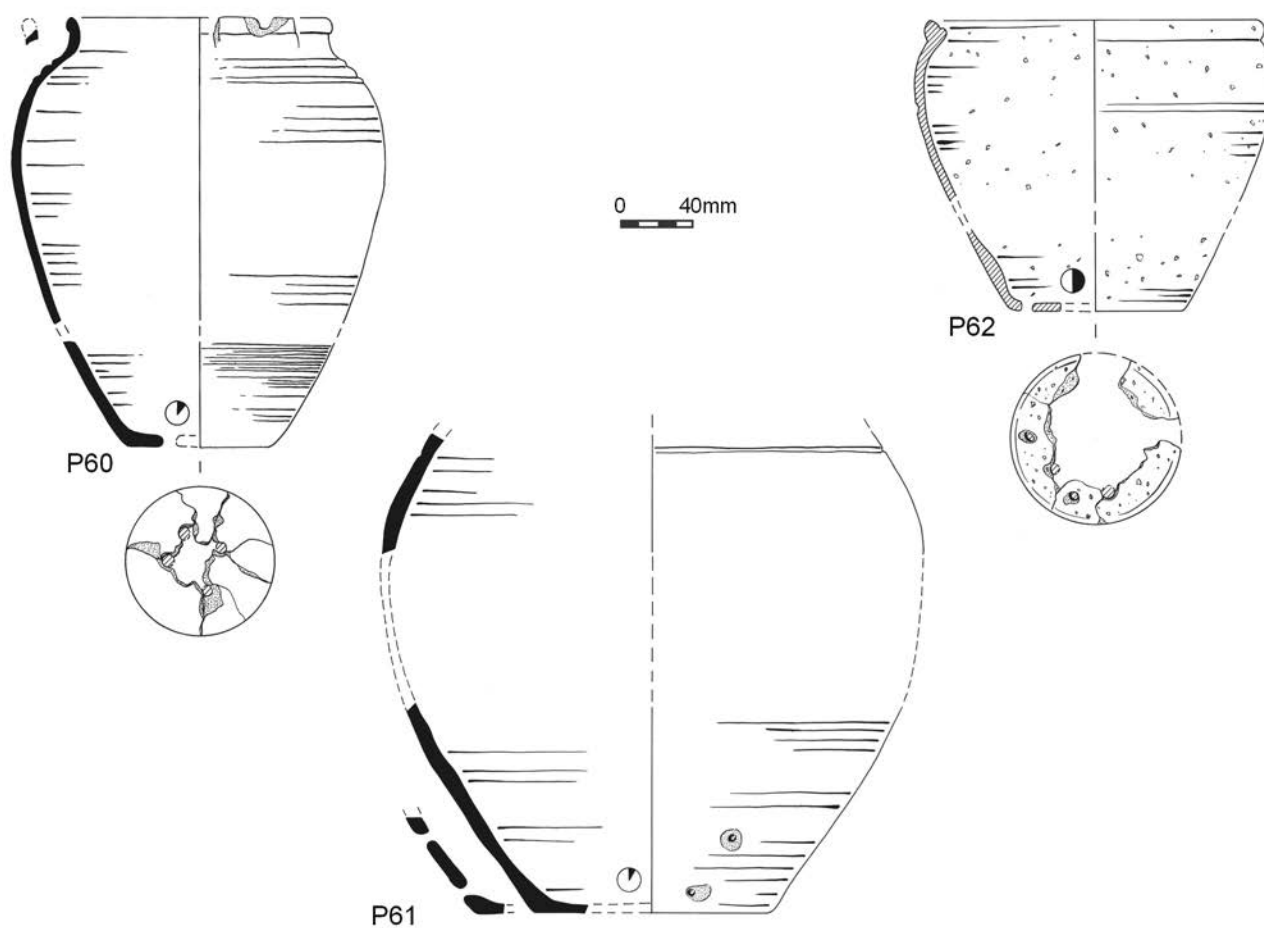


Figure 3.20 Childerley Gate (Site 5): pottery from G6.2. Sandy reduced ware P60, Sandy oxidised ware P61 and Shell-tempered ware P62 jars

The pottery assemblage comprises 1,235 sherds, weighing 18.162kg (Appendix 6.5.8). They have a relatively large average sherd size of *c.* 15g, and constitute 28% (by weight) of all the Roman pottery recovered from the farmstead. All the sherds comprise locally produced coarse wares in a limited range of vessel types, indicating that this was a completely utilitarian assemblage, made by the community to meet its own needs. Seventeen of the vessels have been adapted with post-firing holes drilled through their bases (Table 5, Figs 3.17, 3.19 and 3.20). Although the assemblage contains wasters or seconds, it is more likely to represent a group of vessels that were used for a very specific purpose, rather than a kiln dump.

As well as the pottery, these deposits also contained a small number of non-ceramic artefacts: a nail and an incomplete, small spearhead (Fig. 3.21, OA7; Appendix 3.3.3) with a flanged socket (Manning 1985, 162–6, type

Ib or IIb). Spearheads are usually found on military sites, although they were also used for hunting, and have been found at other rural settlements such as Kempston, Beds. (Wells *et al.* 2004, 416 and fig. 9.11) and Bancroft, Bucks. (Skinner 1994, 339).

A fairly large assemblage of charcoal and charred plant remains was also recovered. The charcoal comes primarily from oak, blackthorn and hawthorn. The high proportion of narrow oak roundwood is suggestive of managed woodland, where coppicing was probably being practised. The blackthorn and hawthorn are traditionally used in stock-proof hedges (Appendix 16.3). The charred plant assemblage is dominated by weed seeds, which constitute 84% of the 229 identifiable fragments (Appendix 15). Docks (*Rumex* sp(p.)) and indeterminate grass seeds (Poaceae indet.) are by far the most common. Thirty-four cereal grains were also recovered, although few could be identified to species. Wheat (*Triticum* sp(p.)) is definitely present, with spelt wheat (*T. spelta*) positively identified. One possible grain of barley (*cf. Hordeum* sp.) was also recovered.

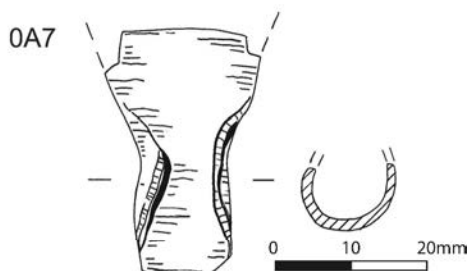


Figure 3.21 Childerley Gate (Site 5): small spearhead with a flanged socket from pottery dump G6.2

#### 3.5.4. Discussion: Childerley Gate (Site 5) ladder system (Phase 3.3)

##### Location

(Figs 3.1, 3.22)

The ladder system established at Childerley Gate in the latter half of the 2nd century was located on flat ground on the northern edge of the Bourn Valley. A minor Roman

road, passing no more than 500m to the south (Chapter 3.1.1), linked the farmstead to the Roman town at Cambridge to the east and Ermine Street to the west. A number of contemporary Roman sites are known within a few miles of Childerley Gate (Fig. 3.1). As well as the farmstead to the west at Ash Plantation (Chapter 3.4), several farmsteads also existed within the vicinity of Cambourne (Wessex Archaeology 2003). Between Childerley Gate and Cambridge, there was a farmstead near Madingley (Tipper 1994) and a substantial settlement at Vicar's Farm (Evans and Lucas forthcoming).

Perhaps the most significant local site is the early Roman farmstead at Caldecote Highfields (Kenney 2007), less than a mile away to the south-west. The pottery from the two sites suggests that they were not contemporary and it is tempting to speculate that Childerley Gate was a replacement farmstead, built by the former inhabitants of Caldecote Highfields. Both shared a similar NE-SW alignment, and the ladder system at Childerley Gate continued beyond the southern limit of excavation roughly in the direction of Caldecote Highfields. However, the evidence for this suggestion must remain circumstantial without further fieldwork.

The lack of evidence for Iron Age settlement at Childerley Gate may be significant. The land along the northern side of the Bourn Valley is exposed to the elements and the heavy clay soils would have made cultivation here difficult before the advent of modern farming techniques. Prior to the 18th or 19th century, the land at Childerley Gate was only farmed in the Roman and medieval periods when relatively high population levels led to an expansion in arable production.

There is, however, an indication that the location of the ladder system at Childerley Gate might not have been as unfavourable for settlement as the areas to the east and west. Clusters of tree-throw holes (L17) were present on both sides of the ladder system; a few were also within it (Fig. 3.22). As is often the case, these tree-throw holes are essentially undated. It is thought that they may date to the medieval period when trees were cleared to create arable fields. If this is correct, the trees may have been growing when the Roman farmstead was in use; the shelter that they would have provided perhaps explains why this precise location, in effect a clearing between two areas of woodland, was chosen. A Roman farmstead would also have required a plentiful supply of firewood and timber; the charcoal assemblage (Appendix 16) includes a significant proportion of narrow, oak roundwood, suggesting the presence nearby of managed woodland.

#### *Settlement morphology and economy*

No remains of any structures were identified within the original ladder system. This may be the result of plough truncation, although there was little other evidence for occupation within the excavated area: the assemblages of animal bone and non-ceramic artefacts are relatively small and, apart from two exceptional deposits, little pottery was recovered.

What evidence there is does hint at occupation within the unexcavated part of enclosure G5, beyond the southern limit of the site. Quantities of pottery were dumped both in the northern corner of the enclosure and just outside it (SG20.1 and G6.2). The presence of wasters suggests there may have been a kiln within the enclosure. The grave in the northern corner is also indicative of nearby

settlement. An early Roman *as* dating to AD 71–79 and a Colchester brooch dating to the first three-quarters of the 1st century were both recovered from the top of a later quarry pit (Chapter 4.4.1), while a copy of a *denarius* dating to AD 103–117 was also recovered from an otherwise undated pit at the southern edge of the site (SG3, Chapter 3.6.3). Several similar pits in the south-eastern quarter of the site may have been associated with activity beyond the edge of the excavation area. Overall, it seems possible that there was an early Roman settlement to the south of the site, which subsequently expanded towards the north-east in the form of the ladder system. This idea strengthens the possibility of a link between Childerley Gate and the earlier, more southerly farmstead at Caldecote Highfields.

The regularity with which the ladder system was laid out suggests the presence of a single controlling hand in the organisation of the farmstead, rather than its being the product of a local community's collective needs. There is little evidence to suggest who might have held this controlling hand, whether a single owner or an official body; this issue is considered further in the discussion of the farmstead in the late Roman period (Chapter 4.3.3). The regular layout also suggests that the architect had a very clear purpose in mind. Although there is evidence for occupation within the southern enclosure, it is almost certain that the block of fields had a solely agricultural function. The situation is less clear for the northern enclosure. However, a slight increase in the volume of artefacts suggests that it may not have been purely agricultural in nature.

Albeit on a much smaller scale, this pattern of large, occupied enclosures, linked by a series of small fields, mirrors the results obtained by fieldwalking on ladder systems in the area around Wharram Percy, Yorks. (Hayfield 1988, 116–8). There, the ladder enclosures all formed a link between known farmstead or villa sites, and were aligned along trackways. Fieldwalking on the farmstead and villa sites has produced the sort of rich artefact assemblages that might be expected, but only a few small sherds have been recovered from the ladder enclosures in between. Lacking even the volume of sherds that are typically deposited during manuring, these ladder enclosures do not seem to have been used for arable cultivation, yet the lack of obvious entrances also makes it unlikely that they represent a specialist system for corralling livestock.

There is a similar lack of direct evidence for how the block of fields at Childerley Gate was used. The relatively small animal bone assemblage is more likely to indicate that animals were not being consumed or butchered in the immediate vicinity, rather than that they were not being kept. The dominance of cattle, almost two-thirds of the assemblage as opposed to less than 12% for sheep or goats, does at least suggest that the fields were not sheep pens. Furthermore, it is unlikely that such elaborate arrangements would have been needed for keeping sheep, which are hardy enough to be left mostly to their own devices (Mackreth 1996, 226). Horses, by contrast, are more likely to have been kept close at hand. They account for a similar proportion of the animal bone assemblage and there is circumstantial evidence that they were being bred on the site (Appendix 13.3.1).

The dominance of cattle, however, is not necessarily an indication that the fields were designed for a pastoral



Figure 3.22 Childerley Gate (Site 5): tree-throw holes round the margins of the Roman farmstead

economy, as cattle would have provided traction within an arable regime. The charred plant assemblage is not particularly indicative of arable production, although the relatively large number of dock seeds from G6.2 is consistent with a cultivated landscape. The relatively poor assemblage may also reflect preservation factors: no waterlogged deposits were present in Phase 3.3 features, and the lack of occupation activity within the excavated area will have reduced the chances of grain or chaff being burnt and disposed of on site.

On balance, the evidence from the excavated part of the ladder system at Childerley Gate suggests that the farmstead's inhabitants practised mixed farming. Unless they were designed for young animals, the individual fields within the ladder system were probably too small to keep cattle or horses on anything other than a short-term basis. This suggests that some of them, at least, may have been cultivated. Cattle would still have been needed to provide traction, for which they were the primary species used until the later Saxon period (Appendix 13.3.1), and their dairy products may have played an important part in the farmstead's economy (see below). It is unclear exactly where the cattle were being kept, or where they were allowed to graze, but the recovery of a significant quantity of blackthorn and hawthorn charcoal, two species that were traditionally used for stock-proof hedging, is at least further evidence for the presence of animals.

#### *Craft activity* (Figs 3.17, 3.19–3.20)

The most remarkable aspect of the artefactual assemblage from the ladder system is the collection of perforated pottery — possibly the largest recovered from a single site. Twenty-seven vessels had at least one perforation; seventeen of them came from a single deposit (G6.2). The recovery of nearly all the perforated vessels from Phase 3.3 deposits may indicate that they were used for a relatively short-lived activity. It is possible that their deposition was a symbolic act to mark the cessation of this activity. Alternatively, they may simply have been discarded in the nearest ditch once they were no longer needed or had been replaced with new vessels.

The vessels are made in a variety of low-fired fabrics, mostly Sandy grey wares, with various inclusions. Nearly all are wheel-made. Four are handmade and have the feel of early Roman or even Iron Age vessels, despite being produced in the first half of the 2nd century. The vessels were pierced in the base, post-firing, and some also in the lower vessel wall. The drill holes vary between one large central hole and, more commonly, up to ten 3–5mm wide holes distributed over the vessel base (Figs 3.17, 3.19 and 3.20).

Large published groups of this type of vessel are rare. Early Roman examples include Writtle in Essex (Going 1988). More recently, the deliberate piercing and deposition of several pots at the base of pits has been observed at Silchester: the widespread practice of 'radical interference that appears to destroy the original functional capacity of a vessel' (Fulford and Timby 2001, 293). The Silchester assemblage has eighteen pots with post-firing holes drilled in the base (from a much larger ceramic assemblage).

The Childerley Gate vessels bear no obvious signs of use, such as food residues, liming or soot, nor any consistent wear marks to show repeated use for one specific

task. They are found in a variety of forms, most commonly as wide-mouthed jars, but also as both medium-mouthed jars, and even narrow-mouthed jars. Their function clearly did not rely on either the shape of the vessel or the width of its mouth.

The perforations were not accidental. They were not used to repair or suspend the vessels, which have not been exposed to repeatedly high temperatures as they would have been if, for example, they had been used as charcoal heaters. They were not used as Bunsen burners in the production of metalwork, although 510g of a ferrous smithing hearth bottom was recovered from the infill of ditch SG18. It has been suggested that perforated vessels were used as strainers in cheese-making (Stilborg 2006, 79). They obviously differ from the specialist, late Roman cheese presses that are occasionally found, but the earlier perforated vessels may represent improvised prototypes. Modern parallels are used as steamers (Stilborg 2006, 79), with the perforated pot placed on top of a pot of boiling water; yet the Childerley Gate vessels do not retain traces of liming. Some perforated vessels are known to have been used in the dyeing process (Stilborg 2006, 23), others as timing devices (Fulford and Timby 2001).

Vessels of this type are often associated with pottery wasters. If pottery production before the mid 2nd century was a seasonal event, taking place after the harvest, it is possible that these perforated vessels were also related to a seasonal activity. Pottery kilns and crop dryers could have been in use at the same time, and both are known to have been used as malting ovens. It is possible that these vessels may even have been fired in the drying ovens as the malt was heated, which would explain their low-fired character; a waster bearing the impression of a cereal grain was found in the pottery dump in the corner of enclosure ditch G5. If the vessels were being fired in malting ovens, they could then have been pierced and used to strain the brewers' malted mash as the fresh beer was produced. Beer would have been an important commodity for the local community: 'by 3000 BC, indeed, intoxicants had become necessities to most societies in Europe...and a whole service of jars, jugs, beakers, strainers and drinking tubes had come into fashion for their ceremonial consumption' (Childe 1946, 52). A 'strainer-bowl' with five post-firing holes was recovered from the Roman Maltings at Beck Row, Mildenhall, Suffolk (Tester 2004, fig. 23, no. 19). In addition, several vessels with perforated bases are recorded from the probable maltings at Orton Hall Farm, near Peterborough, Cambridgeshire (Perrin 1996, fig. 84, no. 109; fig. 86, no. 152; fig. 96, no. 393).

Unfortunately, there is little environmental evidence to connect the Childerley Gate vessels to any one activity. Although 144 germinated grains were recovered from a late Roman rubbish pit (SG95) in Phase 4 (Chapter 4.3.1), they only represent 12% of the grains recovered from the pit, and there is no conclusive evidence from any period that brewing was taking place on the site. Without successful chemical analysis, or more closely associated environmental evidence, it may be impossible to interpret these vessels as anything more sophisticated than strainers. However, their presence in large numbers at Childerley Gate does suggest that the activity for which they were used was an important aspect of the farmstead's economy.

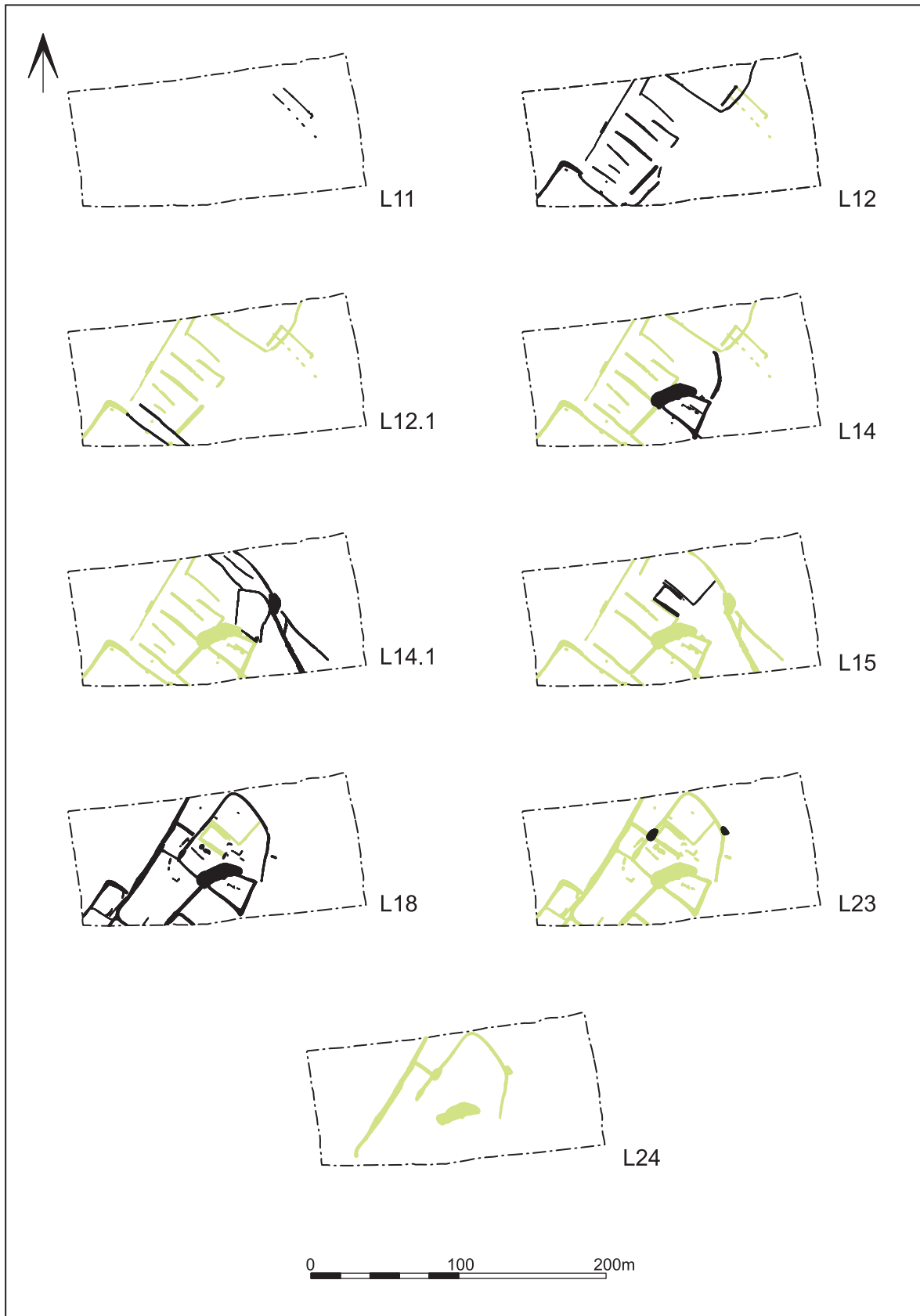


Figure 3.23 Childerley Gate (Site 5): sequential development of the farmstead, with new features shown in black and retained elements in green

### 3.6. Additions to Childerley Gate ladder system (3rd century: Phase 3.4) (Fig. 3.23)

The ladder system that was established at Childerley Gate (Site 5) in Phase 3.3 remained in use throughout the 3rd century. Its layout changed slightly as some of its ditches silted up — the northern enclosure, in particular, fell into disuse — but elements of it did survive into the 4th century (Chapter 4.3; Fig. 3.23). Whereas continuity is visible here, changes were occurring in the wider landscape: the farmstead at Ash Plantation (Site 2) was abandoned (Chapter 3.4), and the one at Caldecote Highfields ceased to exist (Kenney 2007). Some of the farmsteads in the Cambourne area (Wessex Archaeology 2003) were still in use, while the growing settlement at Vicar's Farm (Evans and Lucas forthcoming) was becoming increasingly important in the area.

Evidence for activity in Phase 3.4 is concentrated in the eastern half of the farmstead. Two enclosures (G7 and G8) were added to the eastern side of the ladder system (Chapter 3.6.1, L14). Subsequently, one of these (G8) was redesigned and a pond and two drove-ways were also created (Chapter 3.6.2, L14.1). There is still no conclusive evidence of domestic occupation within the excavated part of the farmstead but activities other than agriculture, e.g. quarrying, are represented in the archaeological record. The ephemeral remains of a building were also identified in enclosure G7.

The Phase 3.4 animal bone assemblage is poorly preserved, although it is significantly more abundant than the Phase 3.3 assemblage (Appendix 13.2.2). Cattle are still the dominant species: 54% of the assemblage. This proportional decrease from Phase 3.3 reflects the higher numbers of sheep or goats and horses; twenty-six dog bones were also recovered, mostly from L15 (Chapter 3.6.3). Both cattle and sheep or goat are represented by a wide range of skeletal parts, and the bias towards head parts, teeth in particular, is due to preservation bias rather than any deliberate disposal strategy. The limited evidence for butchery is also probably due to poor bone preservation.

The mandibular evidence shows a greater incidence of younger cattle within the Phase 3.4 assemblage than in Phases 4 and 5. This is unlikely to be caused by preservation bias, as the Phase 3.4 assemblage is the least well preserved of the three. Infant cattle are represented by six bones from Phase 3.4 deposits, including three mandibles.

The dog bones represent animals in a wide range of sizes, although the majority are medium-sized, probably around 400–500mm at the shoulder. The smallest dog measures 271–2mm at the shoulder; it could have been the runt of a litter, a small 'terrier' type, or possibly a lapdog.

#### 3.6.1. L14: lateral additions to ladder system at Childerley Gate (Site 5) (Fig. 3.24)

The 3rd century saw the addition of two enclosures to the south-eastern side of the Phase 3.3 ladder system. To the south, a completely new enclosure, covering c. 400m<sup>2</sup>, was established (G7, Fig. 3.24). To the north, a single north-south aligned ditch (G8) enclosed an area of land between the ladder system's fields and its original northern enclosure.

#### Enclosure and quarry pit G7–G7.2

(Figs 3.25–3.26)

Enclosure G7 was defined by ditch SG43 (Fig. 3.25), which was one of the largest recorded at Childerley Gate. It was still in use in Phase 4 (Chapter 4.3.2); there is no clear evidence that it was re-cut, but it was presumably cleaned out periodically. It was mostly 1.2–2m wide and up to 0.7m deep, with quite a steep profile (Fig. 3.26, d). Its southern corner splayed out to a width of 4.3m. A much smaller ditch intersected with this corner of the enclosure and continued beyond the limit of excavation (SG110, Fig. 3.25).

The development of the enclosure and, in particular, the location of its entrance have been obscured by quarry pit SG45 on its north-western edge. The ultimate extent and depth of the quarry pit are described in detail below. However, the earliest and shallowest part may have been on its southern margins adjacent to the enclosure. Fig. 3.25 shows the widest extent of the quarry pit and the surviving elements of the enclosure. However, it seems probable that this side of the enclosure, with a possible entrance, was remodelled as the quarry pit expanded. The latest elements include ditch SG44 and post-hole SG51, which may have formed an entrance over the earliest, infilled part of the quarry pit.

The splayed southern corner of the enclosure may also have been the site of an entrance. An erosional hollow formed immediately to the south of the corner, probably as a result of the repeated passage of people and/or animals (SG42, Fig. 3.25). A layer of metalling in the form of compacted small stones was used to fill in this hollow, although some of it subsequently slumped into the ditch (SG43.2, Fig. 3.26, c).

Molluscan evidence from the primary deposits within the enclosure ditch indicates that it periodically contained standing water (Appendix 14, Table A44). Large numbers of the freshwater mollusc *Anisus leucostoma* were recovered, along with smaller numbers of *Lymnaea truncatula*. The deposits also contained a significant number of *Oxychilus cellarius*, which indicates that the margins of the ditch were moist and well vegetated.

The enclosure may have been subdivided, although ditch SG47 had been heavily truncated by ploughing and only part of its length survived (Fig. 3.25). Parallel to it were the even more heavily truncated remains of a possible building SG46. They comprised two beam slots, on the same alignment as each other but slightly offset, and two very ephemeral post-holes perpendicular to the western beam slot. The beam slots were 1.95–3.85m long, c. 0.3m wide and up to 0.15m deep, with a steep profile. There was a possible third beam slot at the western end of the structure, but this area was difficult to interpret due to root disturbance.

A total of seven pits were recorded in or around this enclosure. Two were located in the immediate vicinity of the possible building; they were sub-circular in shape, 1.5–2m in diameter and c. 0.35m deep (SG48, Figs 3.25 and 3.26, e). Two small pits were located immediately south-west of the enclosure, while another three, one of which contained a nail, were clustered immediately to the north (SG49 and SG50, Fig. 3.25).

The pottery assemblage recovered from these ditches and pits, excluding those from the quarry pit (see below), comprises 127 sherds weighing 1.709kg (Appendix 6.5.9). Sandy grey wares form 57% of this assemblage by

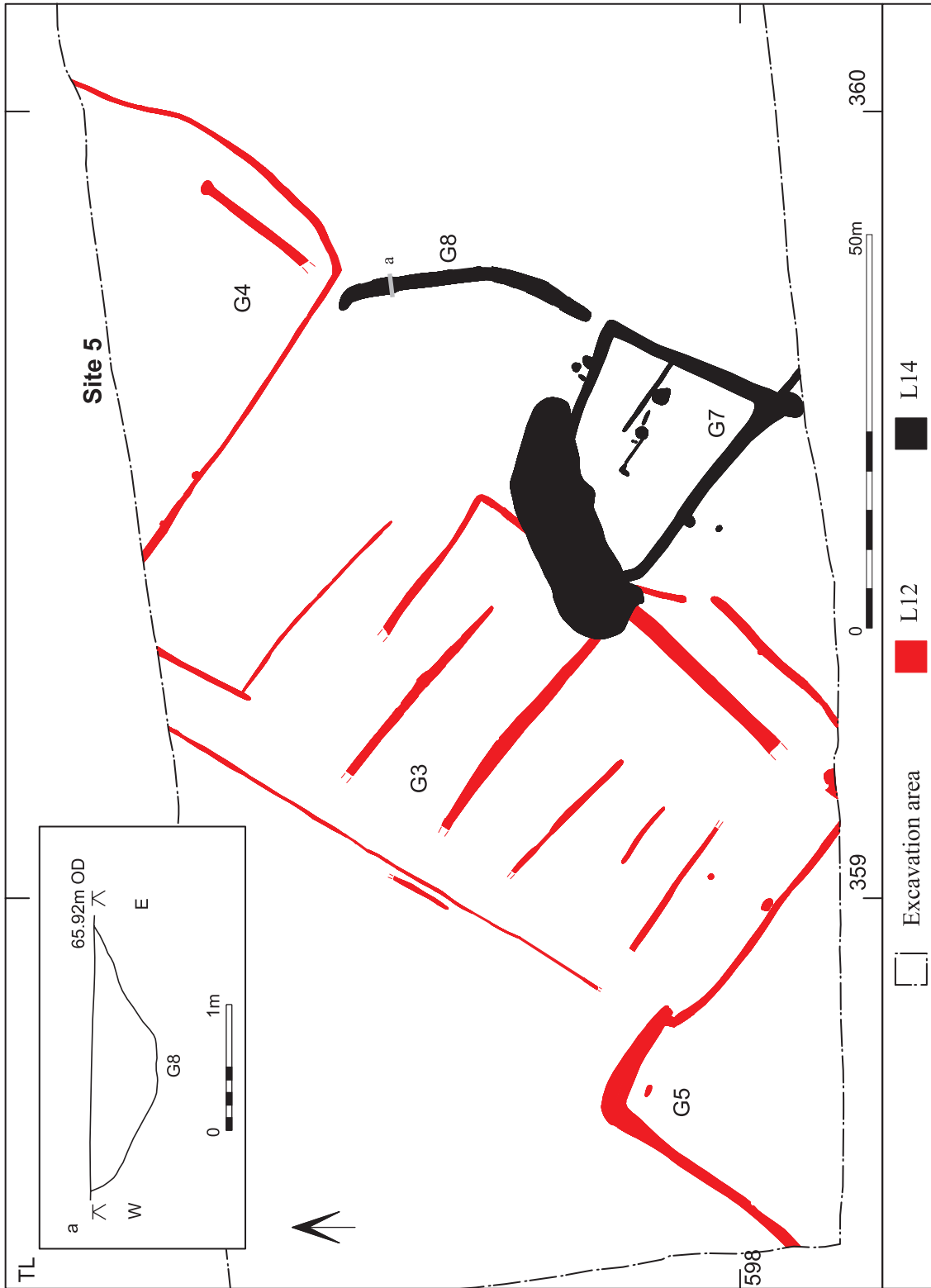


Figure 3.24 Childerley Gate (Site 5): middle Roman additions to the south-east of ladder system L12



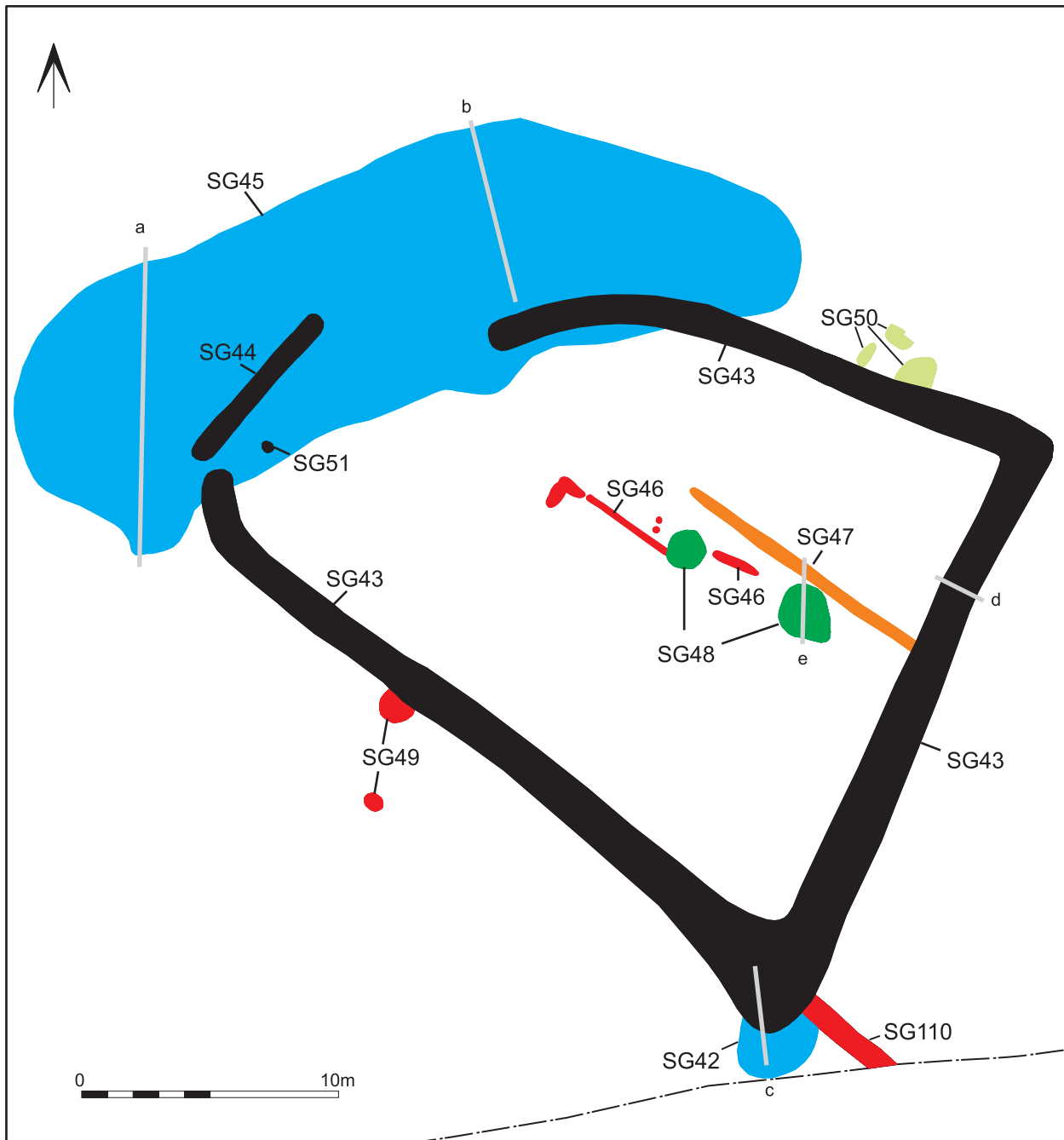
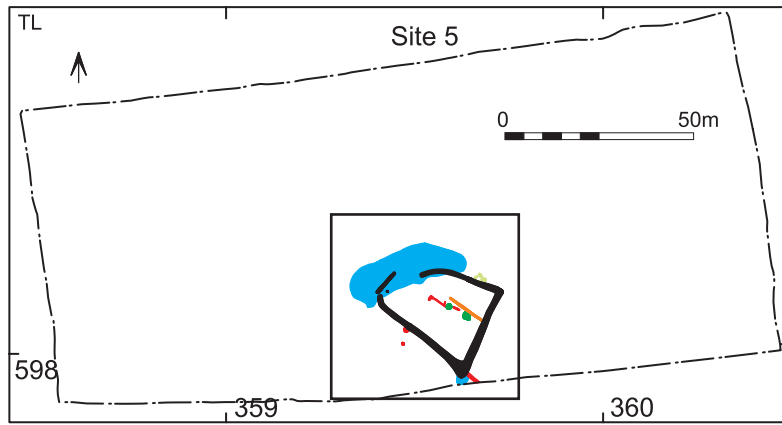


Figure 3.25 Childerley Gate (Site 5): middle Roman enclosure G7, with quarry pit SG45 and building SG46 (L14)

weight, and are present in the form of medium-mouthed jars, wide-mouthed jars and a flanged, straight-sided dish. The remainder of the assemblage includes Horningsea reduced or oxidised wares, which also dominate the assemblage from the quarry pit. In addition, a fragment of a Verulamium white ware mortarium was identified, which was not a common import to the site. South Midland shell-tempered ware is also present in the form of a medium-mouthed jar. The later Roman Nene Valley colour-coats are the best represented fine ware; they include a bag-shaped beaker and a straight-sided dish. In addition, a few sherds of Hadham red ware and a sherd of an Oxfordshire red colour-coated mortarium were recovered. These date to the very end of the Roman period and are probably intrusive from later deposits within enclosure ditch SG43 and its extension SG44.

A small assemblage of twelve sherds of pottery was also recovered from the layer of metalling associated with the southern corner of the enclosure. As might be expected, the pottery is severely abraded, with an average sherd weight of only 9g. It includes a single sherd of early to mid 2nd-century Central Gaulish samian, and two sherds of Nene Valley coarse white ware in the form of a cupped-rim flagon.

#### Quarry pit SG45 (Figs 3.26–3.27)

This quarry pit was the most prominent feature in L14 (Fig. 3.27). Overall, it was 31m long, up to 10m wide and mostly c. 2m deep (Fig. 3.26, a and b). It was dug into chalky marl, like the smaller Iron Age pits at Scotland Farm (Chapter 2.2.5). Its depth increased to 3.35m at its western end where a solution hole had formed in the marl. The quarry pit mostly had a fairly regular, concave profile, although the western end was shallower and stepped. The southern side of the eastern half of the pit also had a pronounced shelf, 0.5–1.2m deep. The horizontal uniformity of the deposits that formed within the quarry pit suggests that it was mostly excavated in a single enterprise, although it is possible that the shelf on the southern side represents initial small-scale quarrying that was subsequently expanded. This shelf had a much more irregular profile, and its infill had been deposited in a much less uniform manner, perhaps indicative of deliberate backfilling.

Their gleyed nature and horizontal upper horizons suggest that the waterlogged deposits in the base of the quarry pit formed in standing water (SG45.1 and SG45.2, Fig. 3.26, b). Three soil samples each produced a rich assemblage of waterlogged plant remains. They provide an insight into both the microenvironment of the infilling quarry pit and, to a lesser degree, the local environment. More than fifty different plants were identified (Appendix 15.3.3). The smaller assemblages from the centre of the quarry pit are fairly similar, with a good representation of wetland plants but relatively few from other habitats. By contrast, sample <5024> from the western end of the pit contains a smaller range of wetland species, but has a good representation of plants from disturbed, waste ground, hedgerow/shrub and grassland communities.

The aquatic plants include duckweed, horned pondweed (*Zanichellia palustris*) and crowfoots (*Ranunculus Batrachium*), while stoneworts (*Chara* spp.) and pondweeds (*Potamogeton* spp.) are represented in the samples from the centre of the quarry pit. Other wetland

plants that may be either aquatic and/or bankside/marshland species include rushes and sedges. ‘Water flea’ eggs and ostracods are also wetland indicators. The molluscan evidence from these deposits also suggests wet conditions: the freshwater snail *Anisus leucostoma* dominates the assemblage, accompanied by *Lymnaea truncatula*, while the presence of *Oxychilus cellarius* suggests that the margins of the quarry pit were damp and shady (Appendix 14, Table A44).

Plants from disturbed or cultivated ground and waste places include goosefoots, oraches (*Atriplex* sp.), chickweeds (*Stellaria media*), stinging nettle (*Urtica dioica*) and swine-cress (*Coronopus squamatus*). Sample <5024> contained the widest range of segetals and ruderals, with particularly good representation of fool’s parsley (*Aethusa cynapium*), scarlet pimpernel, stinking mayweed (*Anthemis cotula*), henbane (*Hyoscyamus niger*), knotgrass (*Polygonum aviculare*), docks (*Rumex* spp.) and small nettle (*Urtica urens*). There is little evidence for hedgerow or shrub plant communities, although sample <5024> did produce a very large amount of fragmented wood and thorn fragments; some of the latter may belong to blackberry/raspberry, seeds of which were identified in two of the samples. A few elder (*Sambucus nigra*) seeds and sloe/blackthorn (*Prunus spinosa*) fruit stones were also found in sample <5024>; they may have been gathered for food. In addition, a large deposit of thin, uncarbonised, hawthorn-type twigs and spines was recovered from the base of the quarry pit (Appendix 16.2.3). This probably resulted from the natural accumulation of fallen or windblown debris from nearby hedges or scrub.

Sample <5024> also produced seed evidence for a number of plants characteristic of meadow and pasture communities, including buttercups, lesser stitchwort (*Stellaria graminea*), self-heal, purging flax (*Linum catharticum*), hawkbit (*Leontodon* spp.) and possibly some of the thistles (*Carduus/Cirsium* spp.), knapweed/thistles, sedges, rushes and indeterminate grasses (Greig 1984).

The artefactual assemblage recovered from these deposits comprises 116 sherds of Roman pottery, weighing 1.579kg, and five fragments of sawn wood. Unusually, the pottery is dominated by oxidised and reduced wares from the Horningsea kilns, along with locally made Sandy oxidised vessels that are mostly from a single medium-mouthed jar (Appendix 6.5.9). The remainder of the pottery assemblage includes undiagnostic sherds from a Nene Valley colour-coat jar, two sherds from a Nene Valley white ware bowl or mortarium, and a base sherd of South Midland shell-tempered ware that has a large post-firing hole in its centre.

The five fragments of wood constitute two sections of what appears to have been the same small, oak plank, with faint but clear tool marks (Appendix 10). The two main fragments are 10–11mm thick, with one eroded and one fairly unweathered face; one fragment measures 210mm by 70mm and the other 205mm by 85mm. Both appear only to be heartwood, of medium growth, with about forty annual rings. They also have traces of woodworm exit holes, showing that the thin planks were used in a damp but not waterlogged situation before being discarded. The fragments have clearly been sawn rather than cleft: in raking light, faint saw marks can be seen on the unweathered faces. On the larger piece, even the scratches

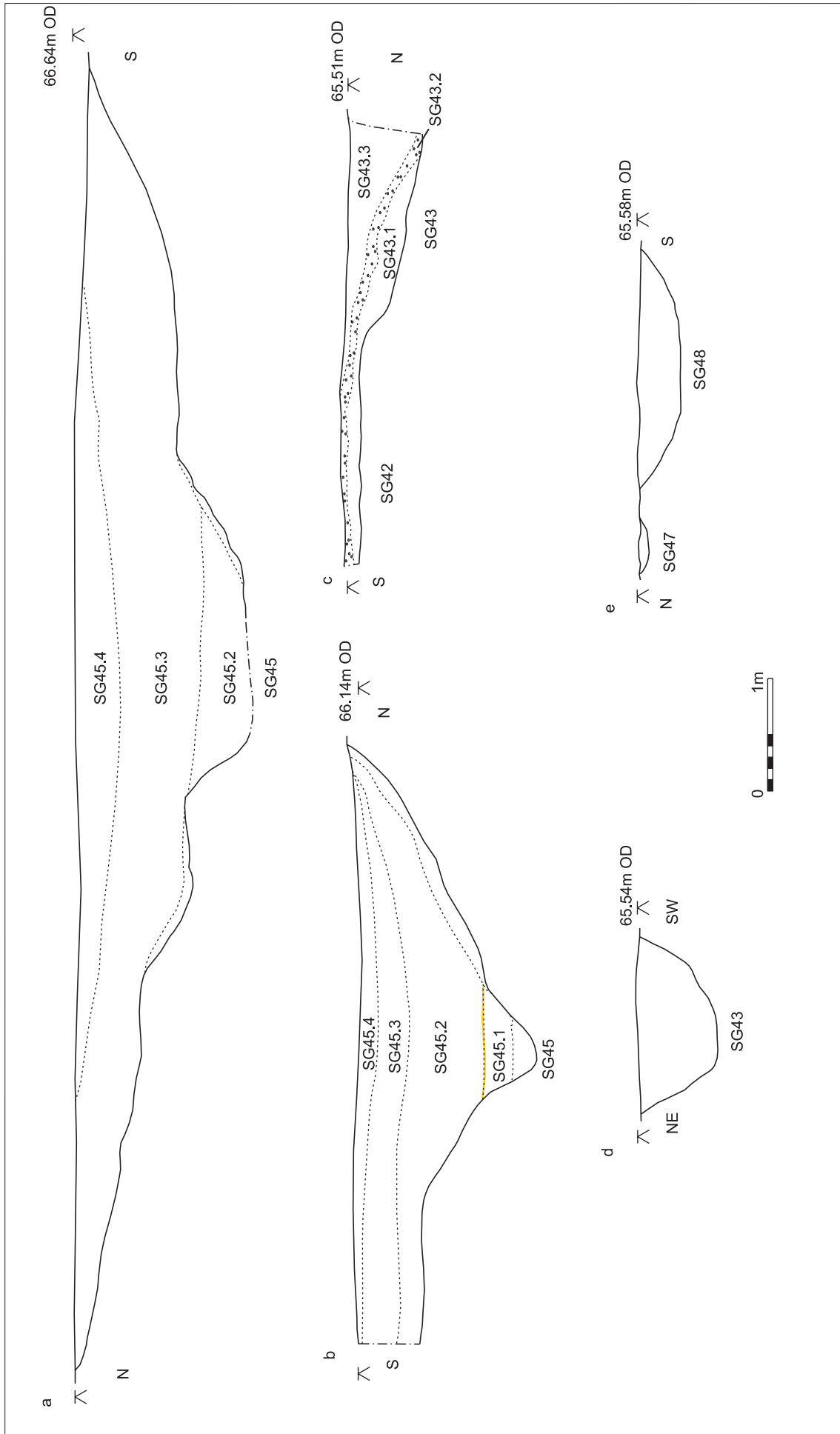


Figure 3.26 Selected section drawings to accompany Figure 3.25



Figure 3.27 Childerley Gate (Site 5): quarry pit SG45 during excavation, looking east. Scale 2m

made by the return stroke of the saw can just be seen, as well as those of the cutting stroke. Three main Roman methods of sawing planks are known, each of which left distinctive marks (Goodburn 2001, 192), but, unfortunately, the fragments are too small to indicate which method was used.

What is rather surprising about this is that a plank of such thin proportions was sawn at all. In the Roman period, thin oak boards were usually produced by careful cleaving, as they had a greater tendency to split and distort if sawn, and the saw cuts (*c.* 5–6mm wide) produced proportionally greater waste than with thicker planking. Indeed, the fragments are thought to be the thinnest sawn board known from Roman Britain, even allowing for some decay of the weathered side. It may be possible, however, that the material is actually a large sawn off-cut from some form of joint cutting, rather than a plank in its own right. The one existing original edge is smooth and undulating, having been cut with an axe or adze. If the fragments actually are planking, not just an off cut, then an origin in some form of furniture, box or light agricultural equipment seems likely.

#### *Enclosure ditch G8* (Figs 3.24, 3.28)

This ditch was located to the north of enclosure G7. It did not form an enclosure in its own right but demarcated the eastern boundary of a block of land between enclosure G7 and the original northern enclosure of the ladder system (G3, Fig. 3.24). It featured a *c.* 2m wide opening at each

end. Although only in use for a relatively short period of time, the ditch was substantial, measuring *c.* 2m wide and 0.5–0.7m deep. No other features were associated with it.

The ditch produced only 614g of abraded, residual pottery, characteristic of the latter half of the 2nd century (Appendix 6.5.13). A small pewter plate was also found near its southern terminal (Fig. 3.28, OA5; Appendix 3.3.3). Most Romano-British pewter finds come from hoards buried at the end of the 4th century (Brown 1979, 207), and there is a significant clustering of such hoards in the fens around Cambridge (Beagrie 1989, fig. 3). The plate was recovered from near the surface of the infilled ditch, perhaps suggesting that it was deliberately buried at a time when the ditch was no longer in use, but was still visible as an earthwork. Even though the plate was broken in antiquity, its upright position in the middle of the ditch, near an entrance, may be an indication that it was a votive offering.

#### **3.6.2. L14.1: re-working of eastern side of farmstead at Childerley Gate (Site 5)** (Fig. 3.29)

Whereas the two enclosures described above (Chapter 3.6.1) may be characterised as additions to the original ladder system, the enclosure, drove-ways and pond of L14.1 represent a more substantial remodelling of the farmstead (Fig. 3.29). Significantly, the original ladder system's northern enclosure (Chapter 3.5.2) has now gone out of use, and the north-eastern end of the farmstead appears to lie within the excavated area.

### Enclosure G9–9.1

(Figs 3.29–3.30)

Enclosure G9 occupied the eastern part of the area previously defined by ditch G8 (Fig. 3.29). It covered an area of *c.* 540m<sup>2</sup>, with a pronounced right angle at its north-western corner. The enclosure ditch varied considerably in size: to the east, it was *c.* 1.5m wide and 0.55m deep (SG53, Fig. 3.29, a); to the west, it was much smaller (Fig. 3.30, e). It is unclear whether this variation is genuine or the result of differential plough truncation. In the enclosure's southern corner was a *c.* 3m-wide entrance. Passage through this had eroded a hollow, up to 0.2m deep, into which a metallised surface of small stones had been inserted. The entrance to enclosure G7, to the south, had been similarly modified (Chapter 3.6.1).

Two pits were associated with this enclosure, one at the entrance and the other on its western side (SG55 and SG56, Fig. 3.29). The pit at the entrance (SG55) was sub-oval in shape, 1.6m long, 1.15m wide and 0.4m deep. This pit was truncated by enclosure ditch G9 (Fig. 3.30, d). Pit SG56 was small and shallow, and truncated the enclosure ditch.

Other than five nails from the infill of the enclosure ditch, the artefactual assemblage comprises 240 sherds of pottery, weighing 3.036kg (Appendix 6.5.15–16). More than 76% of this was recovered from the enclosure ditch; most of the remainder came from the pit at its entrance. Sandy grey wares weighing 998g dominate the assemblage, although the only vessel types identified are medium- and wide-mouthed jars. A finer Sandy grey ware beaker with a funnel neck was also recovered. Sandy reduced wares are well represented, although most of the assemblage derives from a storage jar from the pit. One base sherd in Sandy reduced ware features a hole drilled in the vessel wall. This may have been used for a similar purpose to the large number of such vessels found to the south (G6.2, Chapter 3.5.3), although it is unlikely to have been part of the same group. The assemblage also contains several large pieces from a Horningsea reduced ware storage jar, as well as Sandy oxidised ware medium-mouthed jars and a small amount of late Roman South Midland shell-tempered ware, in the form of a lid and a medium-mouthed jar. Although mostly utilitarian in character, the assemblage does contain some fine wares, including material from the Nene Valley industries in the form of a colour-coated folded beaker and a white ware mortarium with a reeded rim.

A relatively large amount of environmental evidence was recovered from the enclosure ditch. Oak dominates the charcoal assemblage but lesser amounts of blackthorn, field maple, ash and hawthorn are also present (Appendix 16.2). The ash and oak charcoal all comprises fragments of narrow roundwood, which suggests that the wood had been gathered from an area of managed woodland.

The ditch also produced one of the largest assemblages of charred plant remains from the site (Appendix 15.3.3). It comprises 1,938 identifiable fragments, all but eight of which are wild plant or weed seeds. Collectively, this assemblage is probably reflective of a hay meadow or pasture plant community, given the paucity of cereal remains and the good representation of wild plants such as self heal (*Prunella vulgaris*) and ribwort (*Plantago lanceolata*). These are both characteristic of cultivated meadow and pasture communities, together with the buttercups, some of the knapweed/thistles, sedges and

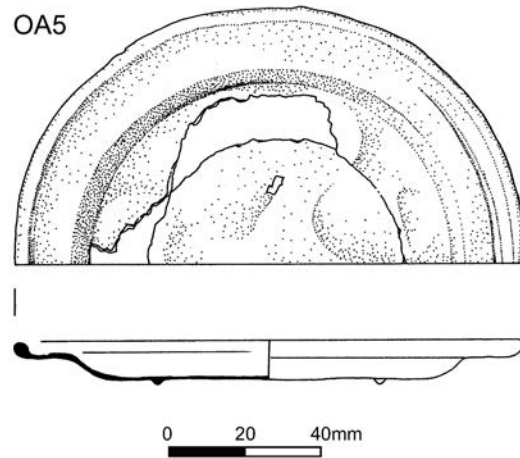


Figure 3.28 Childerley Gate (Site 5): small pewter plate from enclosure ditch G8

indeterminate grasses (Greig 1984). This material may have been grown or imported for hay fodder or stabling materials, before subsequently being burnt as tinder when discarded. The presence of seeds from arable plants such as scarlet pimpernel (*Anagallis arvensis*), poppy (*Papaver* spp.), bromes and possibly cornflower (*Centaurea* cf. *cyanus*) might be evidence of crop-processing activities, with the weeds being separated out and used as tinder before being discarded.

### Drove-ways, boundary ditch and pond G10–10.1 (Figs 3.29–3.30)

Broadly contemporary with enclosure G9 were two drove-ways that converged on a pond close to the north-eastern corner of the enclosure (Fig. 3.29). With the demise of enclosure G4, boundary ditch SG60 defined the revised north-eastern boundary of the farmstead. It was *c.* 1.2m wide and 0.4m deep but little of it survived within the excavated area because of substantial re-cutting in Phase 4 (Chapter 4.3.1) and truncation by a later pond (Chapter 4.3.2).

South-west of the boundary ditch, two drove-way ditches followed a slightly meandering course (SG57, Fig. 3.29). They diverged as they neared the pond, creating a corridor that increased in width from *c.* 4.5m to *c.* 9.5m. The southern ditch terminated at its intersection with the northern side of enclosure G9, which then defined the south-western edge of the drove-way. The southern ditch was up to 0.4m deep; the northern ditch was shallower and had been partly removed by plough truncation.

The pond was relatively large, measuring *c.* 12.5m long, *c.* 7.5m wide and 0.9m deep (SG61, Fig. 3.29, a). Its exact shape and dimensions could not be determined because of truncation by other features. It had a shallow, slightly stepped profile, more suitable for allowing animals direct access than for extracting water. An annular ring was recovered from the upper deposits within the pond; it appears to have been stamped from a copper alloy sheet, and may have had a decorative or dress function (Appendix 3.3.3, Fig. A44, OA12). Similar small rings were found in association with glass and jet beads in a late 3rd- to 4th-century burial from the southern Biddenham Loop, near Bedford (Luke, forthcoming).

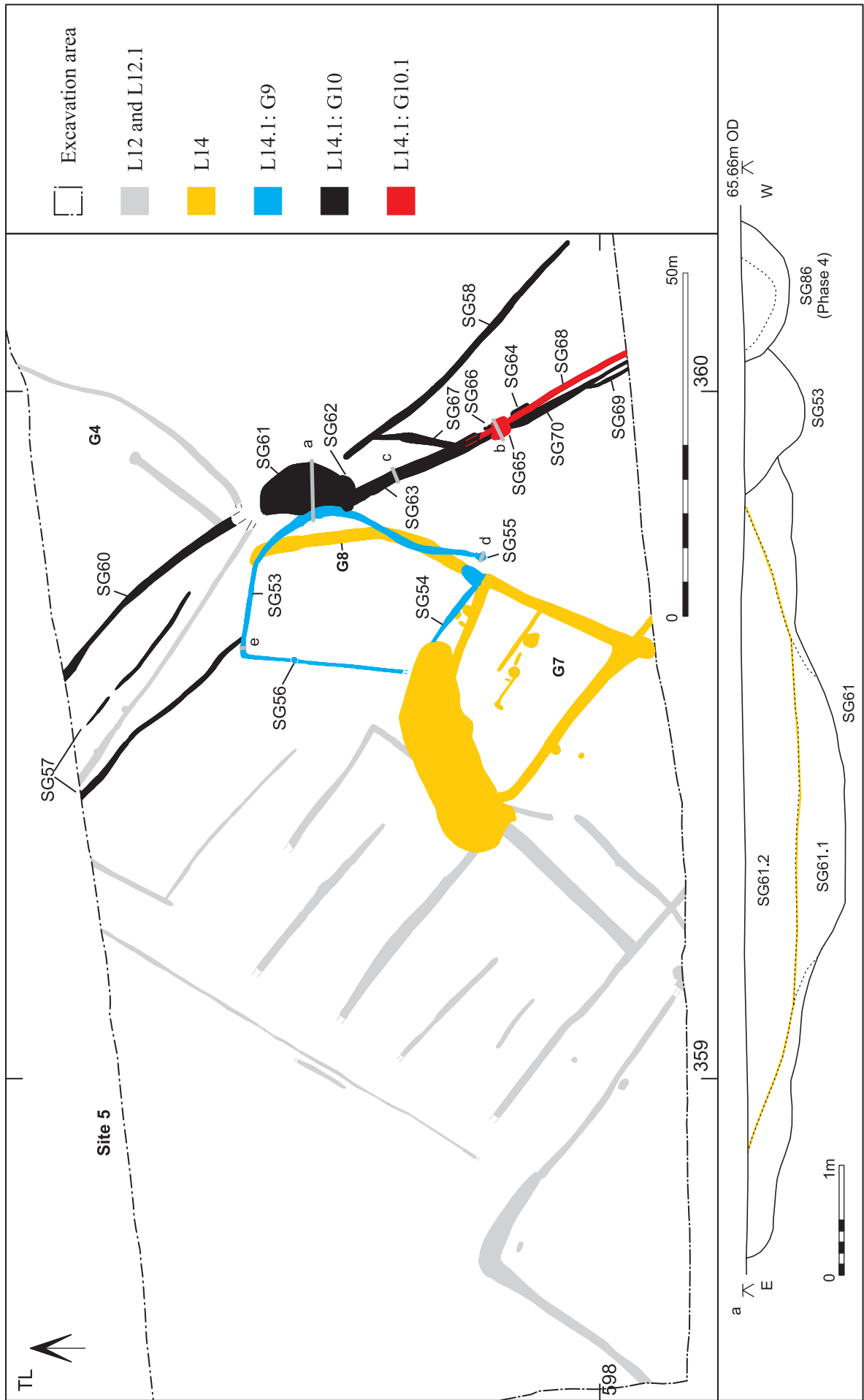


Figure 3.29 Childerley Gate (Site 5): creation of middle Roman pond SG61, with drove-ways to the north-west and south-east, and redefined enclosure G9 to the west

A soil sample from the base of the pond provided a range of information on its microenvironment. The small amount of oak charcoal — narrow roundwood — further suggests that the farmstead was bordered by an area of managed woodland. The molluscan assemblage was dominated by the freshwater snail *Anisus leucostoma*, indicating that the pond contained standing water on at least a seasonal basis. The presence of *Oxychilus cellarius* and *Carychium tridentatum* suggests that the margins of the pond were moist and well vegetated (Appendix 14). The substantial assemblage of waterlogged plant remains (Appendix 15.3.3) contains a large number of waterlogged seeds, but with a low species diversity that is dominated by very large numbers of seeds of the aquatic herb duckweed (*Lemna* spp.). Rushes (*Juncus* spp.) are also well represented, along with occasional ‘water flea’ eggs (*Cladocera ehippia*). These remains suggest that the water in the pond was stagnant, and was perhaps only present on a seasonal or temporary basis.

The layout of the drove-way to the south-east of the pond was relatively complex (Fig. 3.29). It converged towards the pond, creating a funnel that shrank to only *c.* 4m wide and was controlled by a blocking ditch SG67. The eastern side of the drove-way was formed by a single ditch SG58, which terminated *c.* 2.5m from the pond. The western side was initially defined by a substantial ditch, which was 1.8m wide and 0.55m deep (SG63, Fig. 3.30, c). It was only *c.* 20m long but was subsequently extended by a smaller ditch SG69, which was itself re-cut on two occasions (SG70 and SG68). The exact relationship between ditch SG63 and its extensions is unknown, as the intersection between them was destroyed by a post-medieval ditch.

In addition to the numerous ditches, five roughly oval pits were located along the eastern edge of the drove-way (Fig. 3.29). Two barely survived plough truncation (SG66). The other three were more substantial, measuring 2.4–2.95m long, 0.9–1.5m wide and 0.3–0.5m deep, though they were not all contemporary: SG64 was truncated by drove-way ditch SG68, whereas the two pits in SG65 were stratigraphically later than it (Fig. 3.30, b).

An erosional hollow between the northern end of the drove-way and the pond was filled with a metal surface of compacted small stones (SG62).

The pond and drove-ways produced a relatively large artefactual assemblage, including 181g of lava quern fragments (Appendix 4) from ditch SG63 and 433 sherds of pottery, weighing 4.964kg (Appendix 6.5.16–18). The latter was mostly recovered from the area of the pond and the southern drove-way, in particular pits SG65 and SG64. The assemblage consists mainly of locally produced utilitarian coarse wares, supplemented by small quantities of fine wares typical of the mid to late Roman period.

Sandy reduced wares are the most common fabric, weighing 1.160kg. Most of these sherds, however, are from a single medium-mouthed jar from the infill of pits SG65. Other reduced wares include South Midland shell-tempered ware, in the form of a medium-mouthed jar, an unsourced Shell-tempered ware base sherd with a hole in its centre that was possibly made pre-firing, and a large sherd of a Horningsea ware storage jar.

Sandy grey wares also constitute a substantial part of the assemblage, found in a range of jars, dishes and funnel-necked beakers. A base sherd in this fabric has a large post-firing hole in its centre. Coarse Sandy grey ware is also common and includes jars, one of which was modified after manufacture. Although its base does not survive, one hole can be seen drilled in its neck and two more in the vessel wall. The popularity of Sandy grey ware with flint inclusions is unusual; no specific vessel types could be identified but several of these sherds are decorated with incised, combed and stab marks. The popularity of this type of Sandy grey ware may suggest it was designed for a specific activity; it is interesting that this diversification coincides with the presence of a small number of modified vessels.

Oxidised wares and fine wares were not found in large quantities. The latter include a Nene Valley colour-coat beaker, a ‘Castor box’ lid and a straight-sided dish. A medium-mouthed jar in Stanground grey ware was also recorded.

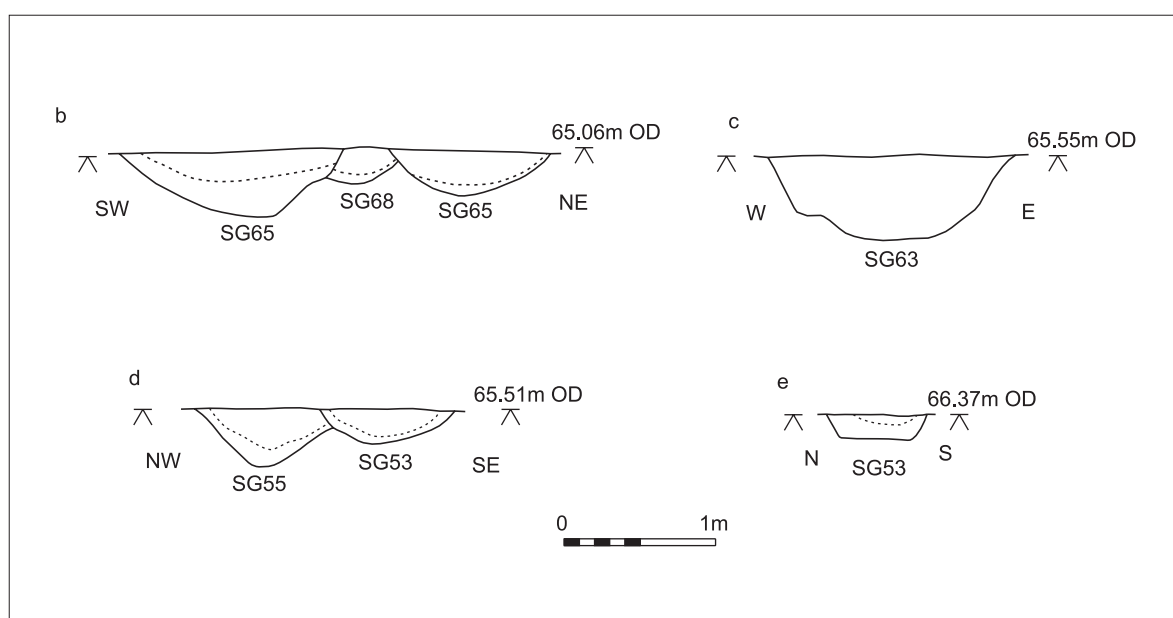


Figure 3.30 Selected section drawings to accompany Figure 3.29

### 3.6.3. L15: construction of additional enclosures at Childerley Gate (Site 5)

(Figs 3.13, 3.31–3.32)

At some point towards the end of the 3rd century, further re-modelling of the farmstead took place (Fig. 3.31). However, this is the least well understood aspect of the farmstead's development, partly because of truncation by ploughing and later features, and partly because of the uncertain relationship between the new enclosures and the later, more extensive reorganisation of the farmstead that took place at the beginning of the 4th century (L18, Chapter 4.3.1).

Three new ditches were constructed. Ditch SG71 was up to 2.2m wide and up to 0.85m deep; it replaced the earlier Phase 3.3 ditch which had marked the northern edge of the fields within the original ladder system (SG31, Fig. 3.13, Chapter 3.5.2). The other ditches were much smaller. Plough truncation had completely destroyed the south-eastern end of ditch SG72 and its two re-cuts (SG73). Ditch SG74 was *c.* 0.8m wide and 0.35–0.45m deep; it formed the south-eastern and south-western sides of an enclosure measuring *c.* 600m<sup>2</sup> in extent. The gap between ditches SG72 and SG74 may have been a trackway, which would then have extended to the south-west between SG72 and the precursor to ditch SG86, before it was blocked off by ditch SG73.

Although the large, curving Phase 4 ditch SG86 (Fig. 3.31) was stratigraphically later than these new enclosures, it is difficult to see how they could have functioned without the presence of a ditch in this location. It is possible that the later ditch was in fact a re-cut of an earlier ditch that was contemporary with the enclosures of L15. A small length of such an earlier ditch might have survived at the western terminal of ditch SG86 (SG10, Fig. 3.32). It is also possible that some of the ditches may in fact have been created at the same time as the Phase 4 enclosures.

There were a number of other features at Childerley Gate which are likely to have been Roman, but which could not be easily related to other elements of the farmstead (L22, Fig. 3.32). Where pottery was present, it was mostly 3rd- or 4th-century in date, although pit SG3 contained a copy of a *denarius* dating to AD 103–117. These features are a further indication of how truncation has hindered interpretation of the later phases of occupation of the farmstead.

The assemblage of utilitarian coarse ware pottery recovered from the ditches of L15 is consistent with a mid-Roman rather than a late Roman date (Appendix 6.5.19). Sandy grey ware fabrics, in the form of jars, are the most frequent amongst the thirty-seven sherds, weighing 364g. Two body sherds of Nene Valley colour-coat are the only fine wares in this assemblage.

### 3.6.4. Discussion: re-working of Childerley Gate (Site 5) ladder system (Phase 3.4)

#### *Settlement morphology*

(Figs 3.13, 3.24–3.25, 3.29)

As revealed within the excavated area, the original Phase 3.3 ladder system was essentially agricultural in character (Chapter 3.5). It seems probable that the main domestic core of the farmstead lay immediately to the south beyond the edge of the site. The original layout of the ladder system was strikingly regular, as if it had been designed by

a single architect. In contrast, the development of the farmstead and the alterations that were made to it during the 3rd century have a much less structured appearance.

The addition of enclosures G7 and G8 to the south-eastern side of the ladder system left its overall structure intact. Indeed, ditch G8 links enclosure G7 to the ladder system's original northern enclosure G4 (Fig. 3.24). The first alteration to the structure came with the excavation of quarry pit SG45; yet even this seems, initially, to have been contained within enclosure G7, only encroaching onto the block of fields G3 as it was expanded.

It seems likely that some level of occupation activity did take place within enclosure G7. It did not have an entrance that would have been particularly suitable for livestock and it contained the remains of a heavily truncated building, the exact size and shape of which are unknown (SG46, Fig. 3.25). It is difficult to ascribe the building a function; it may have been a storage shed associated with the quarry pit. However, the relatively large amount of pottery recovered from the enclosure and the areas to the north and east, not to mention the pewter plate from near the southern terminal of enclosure ditch G8, perhaps indicate that it had a minor domestic function. The building is unlikely to have been the principal dwelling of the farmstead; it is perhaps comparable to the ancillary domestic buildings used to house estate workers on villa estates.

Enclosure G8, on the other hand, had no surviving internal features, and had 2m-wide entrances at its north-eastern and south-eastern corners. It may have been partly contemporary with pond SG61 that was subsequently dug on its eastern side. The creation of the pond suggests that greater numbers of livestock, particularly cattle, were being kept on the farmstead (Mackreth 1996, 227). If the enclosure were directly associated with the pond, then it may well have been used as a livestock enclosure.

The redefinition of enclosure G8 by G9 did not result in a major change in shape or size. It was probably occasioned by the disuse of enclosure G4 to the north, the ditch of which had formed the northern boundary of enclosure G8 (Fig. 3.29). There does, however, seem to have been a change of use. The infill of the features associated with the redefined enclosure produced 3.036kg of pottery, with a concentration at the north-western corner of the enclosure ditch. This is also the part of the ditch which produced a large assemblage of charred weed seeds, material that was either accidentally burnt during crop processing or was used as tinder (Appendix 15.4.2). Furthermore, the construction of a metallised surface in the entrance to the enclosure, in order to fill in an eroded hollow, is unlikely to have been done just for the benefit of animals, and suggests that either people or carts needed to have access to the enclosure. The pronounced right angle at the north-western corner of the enclosure, on a completely different alignment to anything else on the site, may suggest the presence of a building there, of which no traces have survived.

The presence of drove-ways leading towards pond SG61 is interesting for a number of reasons. Firstly, it is clear from the location of the northern drove-way and boundary ditch SG60 that the ladder system's original northern enclosure G4 was no longer in use (Fig. 3.29). The new north-eastern edge of the enclosed farmstead was



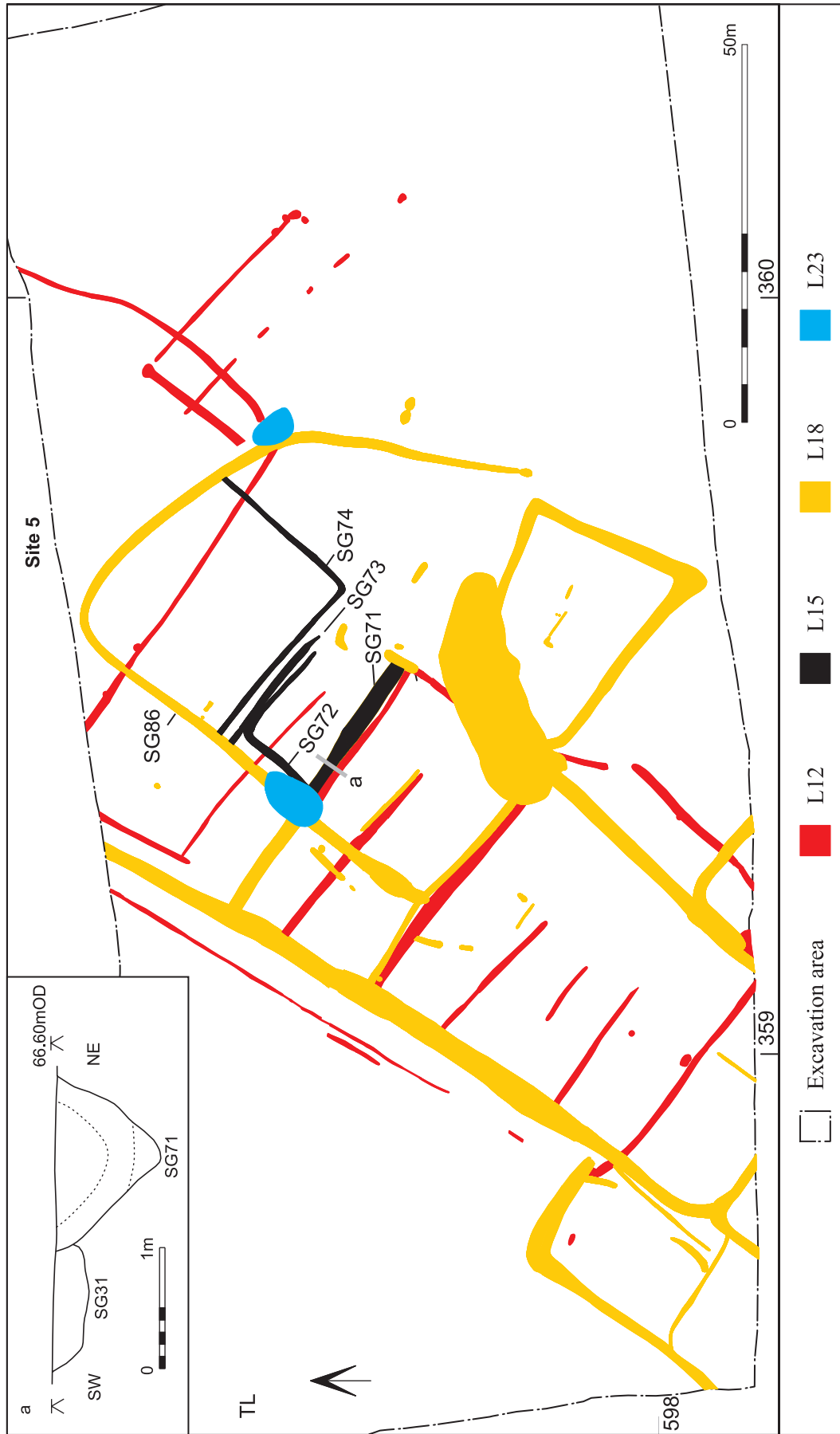


Figure 3.31 Childerley Gate (Site 5): enclosures L15 and their relationship with earlier and later phases of the farmstead

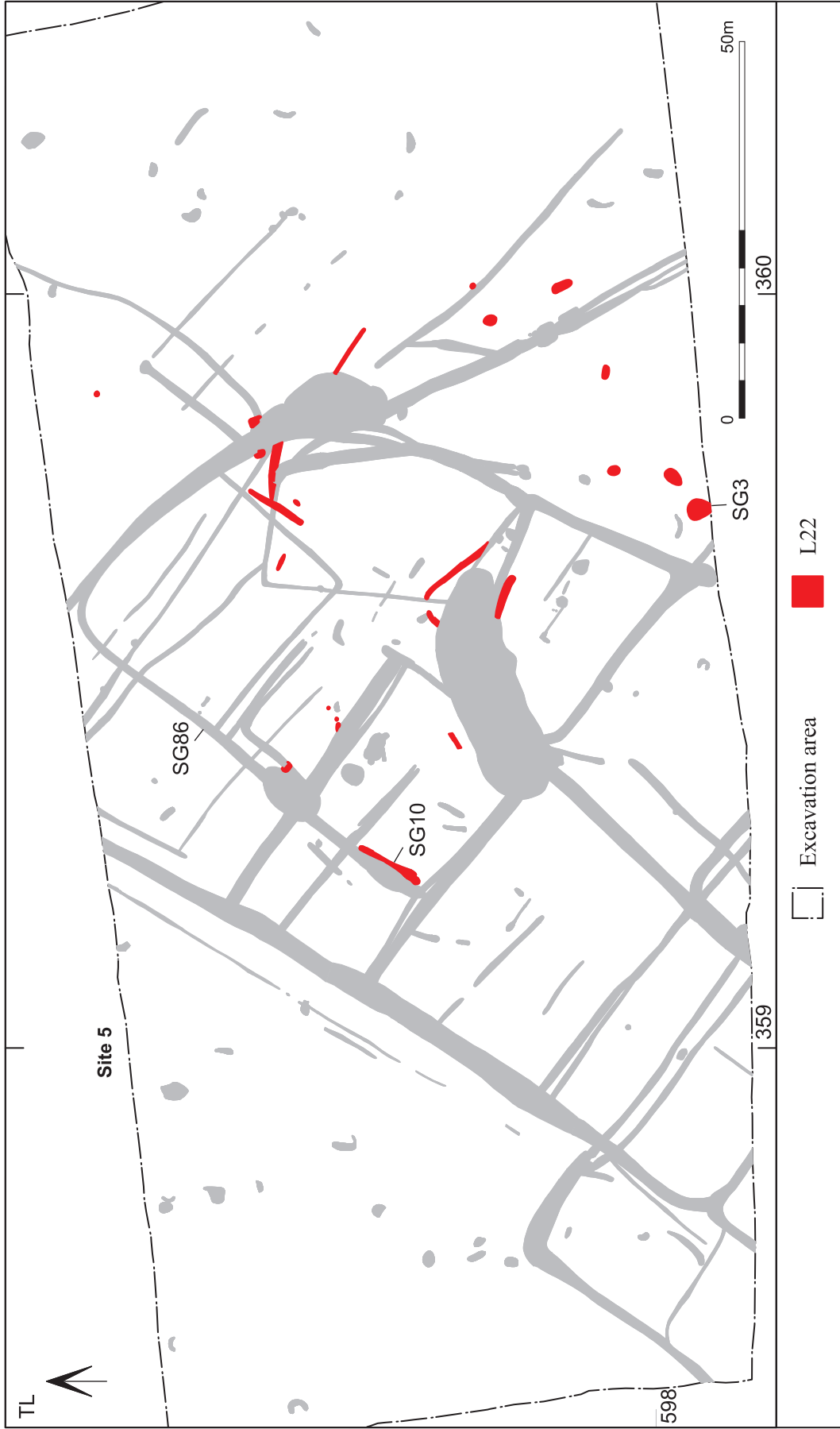


Figure 3.32 Childerley Gate (Site 5): an assortment of Roman features of indeterminate date

defined by ditch SG60, foreshadowing the major reorganisation of the early 4th century (Chapter 4.3.1). The alignment of the drove-ways, across the ladder system's predominantly NE–SW axis, is also striking and perhaps hints at a period of transition within the farmstead. Although the southern drove-way may have led from an area of unenclosed pasture towards the pond, it does reinforce the fact that the excavated remains at Childerley Gate probably form only a small part of a larger settlement, much of which lies beyond the southern edge of excavation. The destination of the northern drove-way is similarly uncertain, although it may have joined the trackway that ran along the north-western side of the original ladder system (SG37 / SG34, Fig. 3.13). Although the function of the original block of fields G3 is debatable, it is likely that their layout had changed by this stage. Some of the original ditches were very shallow, and may now have become completely infilled. When the block of fields was redefined in Phase 4, much larger enclosures were created, perhaps more suitable for livestock management. It is possible that this process was already underway when the northern drove-way was constructed.

#### *Agriculture and the environment*

The available evidence suggests that animal husbandry continued to be a major element of the agricultural regime at Childerley Gate. The creation of a pond, in particular, indicates that more livestock were being kept on this part of the farmstead. The animal bone assemblage also trebled in size between Phases 3.3 and 3.4 (Appendix 13.2.2), although this may be, at least partly, a reflection of the greater volume of deposits or an increase in consumption. Cattle remain the dominant species, although sheep or goats and horses are also well represented. Several dogs were also identified from the infill of the L15 ditches, in a range of sizes from small to large, including a particularly small specimen that may possibly be a lapdog (Appendix 13.3.1). There is no evidence that horses were being bred, as appears to have been the case in Phase 3.3, and the four animals identified were all at least six years old. Young cattle were identified, however, with a number of infant bones recovered from the enclosure to the west of the pond and from the drove-way to the south. These may suggest that cattle were being bred, although they may equally just represent choice cuts of meat.

Over-wintering animals need considerable quantities of both fodder and bedding straw (Mackreth 1996, 227). The large assemblage of charred weed seeds from enclosure G8 includes a good representation of self-heal and ribwort, along with a number of other potential grassland plants, while some of the waterlogged plant remains from quarry pit SG45 may also point to the residues of hay fodder (Appendix 15.4.1). The farmstead clearly had access to both meadows and pasture. The Phase 3.4 assemblages of molluscs and charcoal offer little new information about the local environment. The small mollusc assemblage is dominated by the freshwater snail *Anisus leucostoma*, confirming the seasonal or occasional presence of standing water in the ditches. The charcoal assemblage is characteristic of a largely open environment, with hawthorn and blackthorn hedgerows and managed, mostly oak, woodland.

The quarry pit itself, which is estimated to have produced c. 200–250m<sup>3</sup> of chalky marl, may be indicative

of a new development in the farmstead's agricultural regime. There is literary evidence that the use of marl as a fertiliser was relatively widespread in Roman times. Pliny the Elder refers to the practice of marling in Britain (*The Natural History*, 17.4), saying that a single application would last for eighty years. There is also evidence that marl was used in this way at Scotland Farm in the Iron Age (Chapter 2.2.5). The material does have other uses, e.g. in cob construction, but if it was being extracted for use as a fertiliser, this is at least circumstantial evidence that arable cultivation was taking place. Conversely, marl can also be applied to grassland to improve the quality of the pasture.

#### *Economy and trade*

The balance of evidence suggests that the farmstead's economy was still primarily cattle-based. Cattle were being bred during the 3rd century and, even allowing for preservation biases, they still dominate the animal bone assemblage. The creation of a pond and the evidence that hay was being grown as fodder suggest an increase in the numbers of cattle. It is unclear, however, whether enough beef and dairy products were being produced to form a tradable surplus or whether it was all being consumed on site.

There are other indications that trade and links with the wider area were becoming more commonplace. Although the pottery assemblage is still dominated by utilitarian Sandy grey and reduced fabrics, the range of ceramic wares changes significantly from Phase 3.3. There is a greater variety of both coarse and fine wares, with the non-local fabrics representing a larger proportion of the assemblage. This suggests that trade during the 3rd century was becoming more diverse, with access to a wider area, and may also indicate that the farmstead's inhabitants were becoming more affluent. Mortaria were also now being used, with examples in Nene Valley white ware, Verulamium white ware and Oxfordshire red colour-coat. This may indicate that the occupants of the farmstead were becoming more Romanised, embracing foreign cooking techniques which involved the grinding of herbs and spices and the preparation of sauces.

The pewter plate from enclosure G8 is also indicative of a community that was becoming wealthier, although the fact that only one was deposited is perhaps still a sign of a relative lack of affluence. Hoards of pewter vessels are usually considered to have ritual significance. The deposition of a single item, rather than a hoard, may be the response of a less affluent community to a recognised ritual tradition. Nearby excavations at Lower Cambourne produced a hoard of three pewter vessels from the base of a pit (Wessex Archaeology 2003, 25); they were probably deposited in the late 3rd or 4th century. Two pewter plates of similar form and size to the Childerley Gate example were found in a late 4th-century context in bog mud at Verulamium. They were in loose association with coins and are thought to be votive offerings (Goodburn 1984, 65–66). At Kilverstone in Norfolk, a hoard of blacksmith's tools was accompanied by at least six pewter plates and a possible flagon (Challands 2006, 125–6).

Despite the evidence for trade with other communities, there is a notable absence of coins within the artefact assemblage. Although it is possible that goods were being exchanged rather than sold, it is unusual that no coins were recovered, particularly in view of the number that were deposited during the early 4th century (Appendix 2.4.1).

This may simply reflect the fact that only a part of the overall farmstead was investigated within Site 5. However, it could also suggest that the farmstead was part of a much larger, internally self-sufficient estate or other organisation. Management from a central body would have seen any surplus redistributed to the centre, with little

reliance on monetary transactions (Evans and Lucas forthcoming). The idea that the farmstead may have been part of a much larger estate is discussed further in Chapter 4.3.3.

## 4. Late to Sub-Roman Agricultural Settlements (Late 3rd–5th Centuries AD)

### 4.1. Introduction

The end of the 3rd century is traditionally viewed as a time of upheaval in Britain, especially in East Anglia. Carausius had declared himself emperor in 286 and fled to Britain, soon to be ousted in turn by Allectus; Saxon pirates were raiding the eastern shores; and inflation was rampant, making the coinage increasingly worthless (Williams 2004, 5). The precise level of turmoil is debatable: although inflation does certainly seem to have been a problem, Britain actually seems to have been quite peaceful under Carausius (Williams 2004, 21), while there is some doubt about the scale and potency of the pirate raids (Pearson 2006).

Whatever upheaval the end of the 3rd century may have experienced, the first half of the 4th century was characterised by relative peace and stability as Britain experienced a period of prosperity, which can be seen in East Anglia through the increased recovery of valuable objects such as pewter vessels and iron bar shares (Appendix 3.3.3). However, a dichotomy developed in the relative fortunes of different parts of the country during the 4th century: whereas much of the western and central areas remained prosperous, albeit within a changing socio-economic climate, East Anglia began to go into decline. Rising sea levels meant that the fens were largely abandoned by *c.* 350, while the level of coin usage appears to have diminished in the second half of the century (Williamson 2006, 41). A number of towns in East Anglia also acquired defences for the first time during the 4th century, perhaps indicating that pirate raids were actually a significant problem.

On the basis of the artefactual evidence, the settlements identified in the area to the west of Cambridge do seem to have been more prosperous during the 4th century, with hoards of pewter or glass vessels, bar shares and plough coulter revealed at Cambourne. However, there does not seem to have been the same flourish as was visible in other parts of East Anglia and beyond, though a number of the settlements managed to continue into the final decades of the 4th century (Wessex Archaeology 2003, 97–8), with evidence of a cattle market in operation at Vicar's Farm (Evans and Lucas forthcoming).

The end of the 4th century saw a much more dramatic decline across most of Britain, following the withdrawal of Roman power and influence from the province. Although there may have been a considerable degree of continuity in the landscape, with the retention of Roman field boundaries in areas such as the Bourn Valley through the 5th, 6th and 7th centuries (Stocker 2006, 52), the population becomes much less visible in the archaeological record. The reason for this is far from clear: although the economic collapse that followed the cessation of Britain's existence as a Roman province can easily account for the decline of high status settlements

and a lack of demand for expensive goods, the almost total disappearance of Roman crafts and technologies, including even the most basic industries, requires further consideration (Esmonde Cleary 2001, 96–97). Scientific studies suggest that the climate became colder and wetter, and there does seem to have been a genuine and significant decrease in population numbers (Stocker 2006, 52), but the decline of the Roman manufacturing industries suggests that social as well as economic factors played a crucial role in shaping the landscape in the 5th century.

### 4.2. Late Roman roadside settlement at Bourn Airfield (late 3rd–4th centuries: Phases 3.4–4)

(Figs 4.1–4.4)

The first evidence for the construction of enclosures at Bourn Airfield (Site 3) comes from the late Iron Age (Chapter 2.3). At that time, and during the early to middle Roman period (Chapter 3.3.2), this land and the surrounding area was used for pasture, entailing the construction of drove-ways and livestock enclosures. There is no evidence that the land at Bourn Airfield was occupied at this date, and the enclosures and drove-ways seem to have gone out of use by the beginning of the 3rd century, although the land may still have been used for open grazing. This situation did not change until the end of the 3rd century, or possibly the beginning of the 4th, when two linear series of enclosures were established (G49/G50, Fig. 4.1 and G53, Fig. 4.2). It is possible that they were parts of ladder systems, similar to the one at Childerley Gate (Chapter 3.5), but insufficient of either was seen to be certain. It is clear that G49/G50 was occupied and could perhaps be characterised as a minor roadside settlement. It represents the only evidence, from any period, of human occupation at Bourn Airfield that was more than temporary in nature.

Of all the sites that were excavated, Bourn Airfield was the most severely affected by subsequent activity in the medieval and post-medieval periods (Chapter 1.3; Fig. 4.3), thereby complicating the interpretation of the Iron Age and Roman remains that were revealed there. Some of them were completely truncated and some of the artefact assemblages have become mixed: a flint arrowhead and a gun cartridge were both found in Roman enclosure ditches (Appendix 3.3.2). Equally, a number of Roman artefacts were recovered from later deposits, in particular the infill of post-medieval ditch G58, which cut across the settlement enclosures (G49/G50). The residual artefacts recovered from this ditch include a complete Roman hairpin (Fig. 4.4, OA4) (Appendix 3.3.2). This particular pin is likely to date to the 1st or 2nd century and may have been kept into the late 3rd century as a family heirloom. The infill of the post-medieval ditch also contained four Roman coins: three late 3rd-century radiates, of which

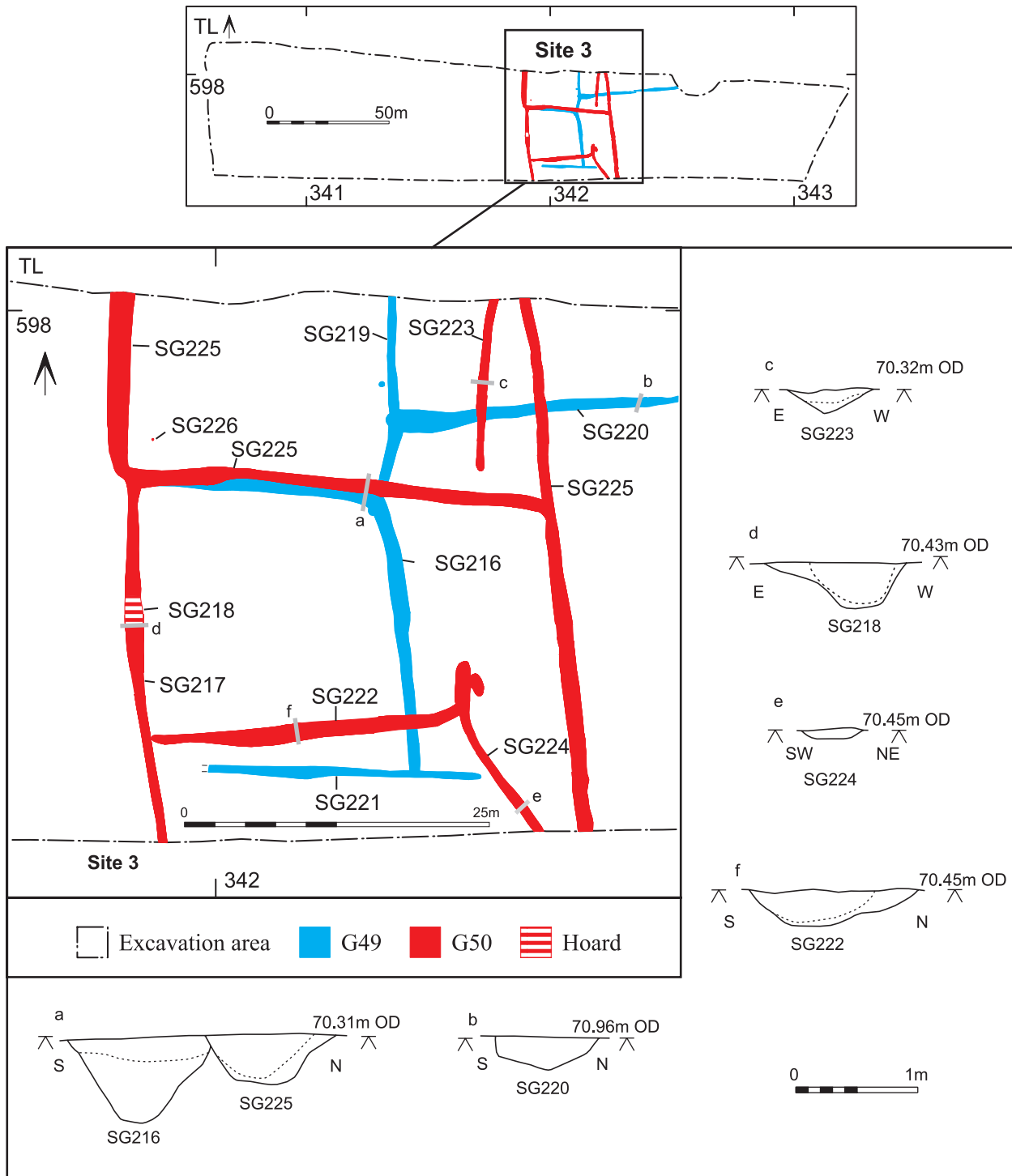


Figure 4.1 Bourn Airfield (Site 3): late Roman roadside settlement (L16 and L16.1)

two are locally made barbarous radiates, and a bronze coin from the 330s (Appendix 2.4.2).

The animal bone assemblage is relatively small. Preservation is not as good as at Childerley Gate (Appendix 13.2.2), which may account for the predominance of the more robust cattle bones. However, horses are less well represented than at Childerley Gate. The proportion of sheep or goats in the Phase 4 assemblage is higher than in the Phase 3.4 assemblage, a trend which, at Childerley Gate, continued into the sub-Roman period. Few other species were identified at Bourn Airfield, with notably fewer dogs than at Childerley

Gate, and no pigs. Again, this may be due to a preservation bias, although a chicken bone and a partially articulated small crow, possibly a jackdaw or magpie, were recovered from one of the Phase 4 ditches.

**4.2.1. L16: roadside settlement at Bourn Airfield (Site 3): Phase 3.4**  
(Figs 4.1–4.2)

The late Roman settlement at Bourn Airfield was established at the end of the 3rd or the beginning of the 4th century. A small part of this settlement had previously been excavated prior to the construction of a water

pipeline immediately north of Bourn Airfield (Kenney 2000). Two sets of linear enclosures, *c.* 70m apart, were created on a north–south alignment (Figs 4.1 and 4.2). The infill of the western enclosures G53 contained few artefacts, suggesting an agricultural use; the significantly larger volume of artefacts from G49/G50 is indicative of human occupation.

#### Enclosures G49

(Fig. 4.1)

The precise layout of these enclosures is difficult to determine, due to plough truncation and their subsequent renewal (G50, Fig. 4.1). The latter included the thorough cleaning-out or re-cutting of the ditch that defined the western edge of the enclosures, removing all trace of the original ditch.

Only one complete enclosure, *c.* 450m<sup>2</sup> in extent, was identified within the excavation area. Part of a second enclosure was identified to the north. Ditch SG220 formed the southern side of an east–west aligned drove-way, the northern edge of which was defined by a ditch revealed during the pipeline excavation (Kenney 2000). Ditch SG221 may similarly have marked the northern edge of a drove-way, with the southern edge lying beyond the excavated area. However, its eastward continuation could

equally be a sign that there were originally further enclosures to the east.

The size of the ditches varied considerably. Plough truncation, particularly towards the south of the site, may partly account for this. Ditch SG216 was the largest, measuring 0.9–1.35m wide and 0.4–0.7m deep. By contrast, ditch SG221 was no more than 0.15m deep, with both ends completely truncated by ploughing. Only two other features were associated with the enclosures: a small pit at the corner of SG216; and a single post-hole next to SG219 (Fig. 4.1). However, the pipeline excavation to the north revealed a second small pit, as well as a spread of Roman occupation debris in a slight hollow, measuring *c.* 20m long, at least 12m wide and up to 0.2m deep.

The artefact assemblage from the enclosures mostly comprises pottery. The only non-ceramic items are five nails from the infill of ditch SG220 (Appendix 3.3.2) and two Roman coins (Appendix 2.4.2) from ditch SG216: a late 3rd-century radiate and a bronze coin from the 330s.

The pottery assemblage comprises 197 sherds, weighing 3.897kg (Appendix 6.5.40–41). It has an unusually high average sherd weight of *c.* 20g, due to the presence of four sherds (one of which is very large) of Horningsea reduced ware storage jars. Sandy grey wares with various inclusions are the most common pottery fabric, appearing in a variety of jar and dish forms. One

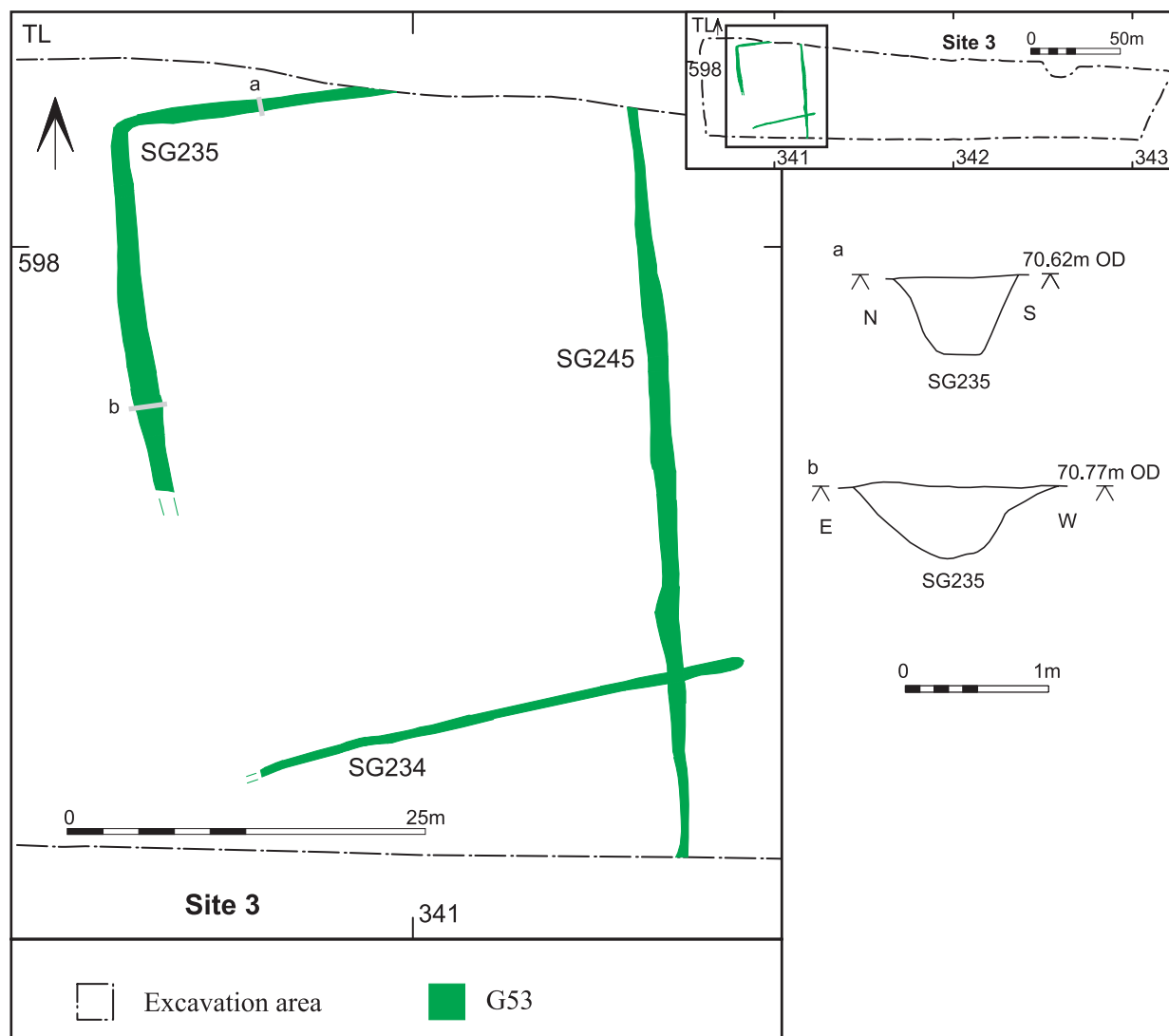


Figure 4.2 Bourn Airfield (Site 3): linear series of late Roman enclosures L16

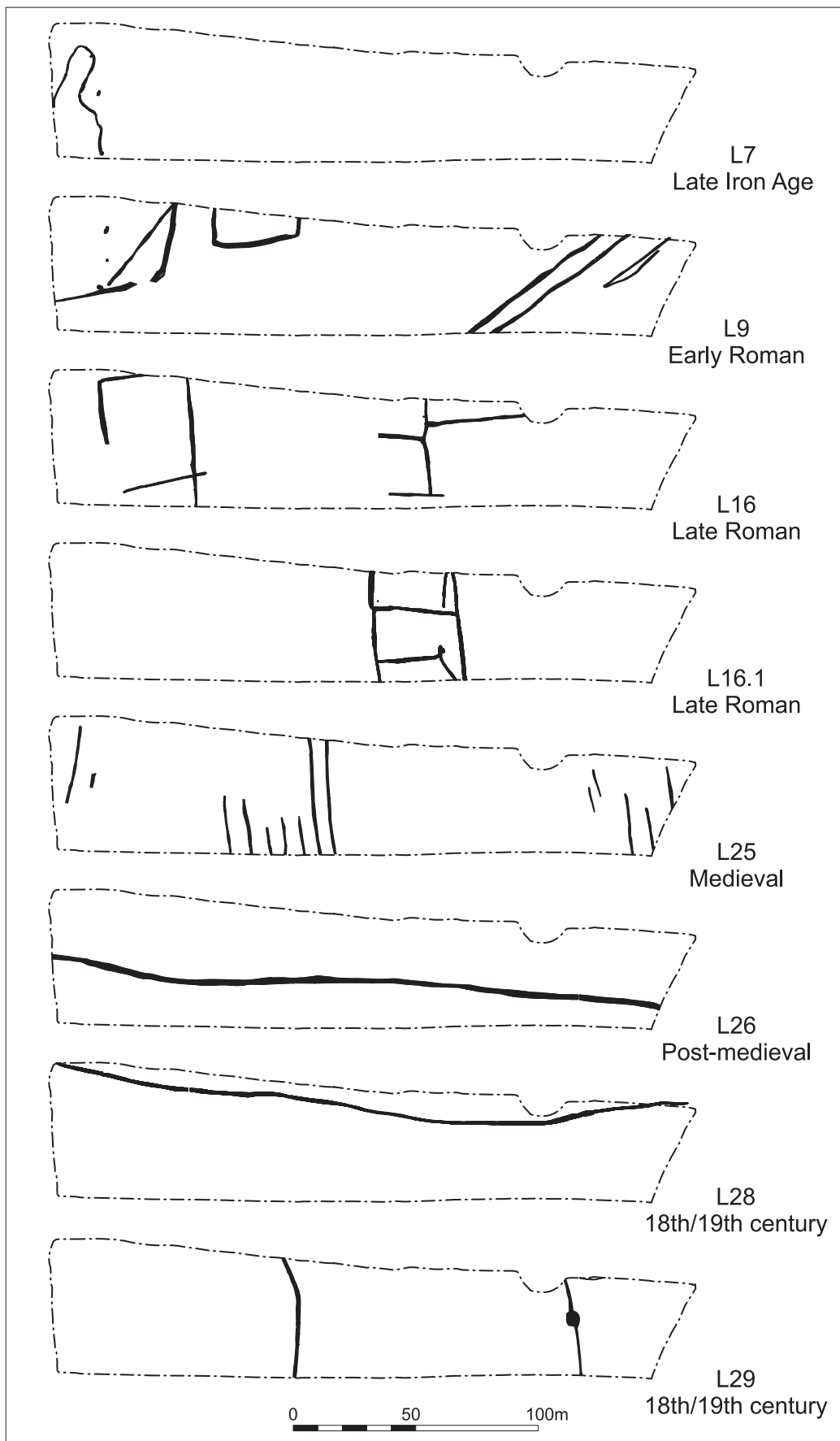


Figure 4.3 Bourn Airfield (Site 3): cross-period development of the site from the Iron Age to the 19th century



base sherd has a post-firing hole in its centre. One of the Sandy reduced ware vessels is handmade and has a partially drilled hole in its base; its early Roman character suggests that it is residual, unless it represents an early Saxon vessel. A flagon and jar in Sandy oxidised ware were also found, together with sherds of South Midland shell-tempered ware in the form of jars. The Nene Valley fabrics include a colour-coated folded beaker, a coarse white ware jar, and two white ware mortaria.

In addition to the pottery that was recovered during the excavation of Site 3, the pipeline excavation to the north produced an assemblage of 347 Roman pottery sherds, weighing 5.203kg. Their date and the range of vessel types tallies closely with the collection from Site 3. The assemblage includes 145 sherds from a single vessel, apparently deliberately placed in the small pit. Most of the remainder came from the infilled hollow, which produced 143 sherds, weighing 2.157kg, as well as a small quantity of floor and wall tile. A variety of vessel types, including jars, bowls, flagons and mortaria, are present.

Little ecofactual evidence could be obtained from the enclosures. The two most productive samples together yielded only forty-four identifiable charred plant items — almost entirely cereal grains and hulled wheat chaff fragments, with spelt positively identified. Just four charred weed seeds were recovered, plus a very small amount of hawthorn and blackthorn charcoal (Appendix 15.3.3). As the samples were taken from an area of settlement activity, poor conditions of preservation are the likely cause for their paucity of charred plant items.

The molluscan evidence is more informative. The freshwater snail *Anisus leucostoma* is again present, attesting the presence of temporary standing water in the ditches, but it does not dominate the assemblage (Appendix 14.3). Instead, *Vallonia excentrica* is the most common snail, indicating the presence of dry, short-turfed grassland. However, a significant presence of *Trichia striolata* and especially *V. pulchella*, along with lesser numbers of the virtually amphibious snail *Carychium minimum*, suggest that there were also pockets of damp grassland, or at least boggy areas at the margins of the ditches.

#### Enclosures G53 (Fig. 4.2)

This group of enclosures extended beyond the southern and northern limits of excavation (Fig. 4.2). At least two enclosures were identified; the northern one was c. 1,500m<sup>2</sup> in extent. The presence of further enclosures is suggested by the fact that east–west ditch SG234 continued eastwards beyond its intersection with SG245. Both ends of this ditch had been completely truncated by ploughing, and it is conceivable that further enclosure ditches to the east may have been destroyed entirely. It is even possible that both sets of enclosures (G53 and G49) were connected by this ditch. The size of the ditches varied considerably: SG235 and SG245 were 0.6–1.9m wide and 0.4–0.55m deep, both with a steep profile, whereas SG234 was only 0.7m wide and no more than 0.1m deep.

Only a residual flint arrowhead and 55g of Roman pottery were recovered from these ditches (Appendix 6.5.45). The pottery is indicative of a 2nd-century date and is presumed to be residual since the enclosures were stratigraphically later than a 2nd-century enclosure (G48.1, Fig. 3.7). Their shared alignment suggests that



Figure 4.4 Bourn Airfield (Site 3): complete Roman hairpin, recovered as a residual find from post-medieval ditch G58

they were contemporary with the early 4th-century settlement to the east (G49, Fig. 4.1).

#### 4.2.2. L16.1: reorganisation of roadside settlement at Bourn Airfield (Site 3): Phase 4 (Fig. 4.1)

The Bourn Airfield settlement was redesigned towards the middle of the 4th century (G50, Fig. 4.1). The new set of enclosures appears to have been more tightly structured than the earlier, more accretive layout. They were arranged in a tightly ordered, linear series, defined by parallel ditches on either side. Their structure was also more complex, with the addition of internal trackways or funnelled entrances on the eastern side. A hoard of fifteen coins was recovered from a segment of the western enclosure ditch (SG218, Fig. 4.1, d).

The ditch defining the western side of the enclosures followed exactly the same line as the equivalent ditch in the earlier settlement. This precise correlation implies that the earlier ditch was still clearly visible when it was re-cut. In contrast, the opposing ditch was repositioned further to the east, increasing the width of the enclosures from 21m to 33m. The east-west aligned dividing ditches remained in roughly the same positions. Ditch SG222 was located slightly further to the north than its predecessor (SG221). However, the latter was the shallowest of the ditches identified within the settlement and it may have been less clearly visible.

The size of the ditches varied considerably. This may be partly attributable to plough truncation, particularly towards the southern edge of the site, but some of the differences do seem to be genuine. At the northern limit of excavation, the west side of ditch SG225 was 1.8m wide and 0.75m deep; yet on its eastern side it shrank to as little as 0.85m wide and 0.25m deep. The other ditches were mostly up to *c.* 1.4m wide and up to *c.* 0.35m deep, although the terminal of ditch SG224 had been deepened to 0.55m.

An urned cremation was found in a small, shallow pit in the south-western corner of the northern enclosure (SG226, Fig. 4.1). The urn contained just under 500g of burnt human bone (Appendix 12.3.2). There were no repeated skeletal elements, and all the bone appeared consistent in size and shape, indicating the presence of a single adult. The percentage of bone from each body area, when compared to that expected from a complete individual, indicates over-representation of the lower limbs at the expense of the axial skeleton. Since the deposits consisted primarily of robust cortical bone fragments, this is perhaps unsurprising, and indicates that the poor levels of preservation that affected all the ecofacts at Bourn Airfield are responsible. The urn was a plain Sandy grey ware vessel; not enough of it survived to assign a specific type or date (Appendix 6.5.42).

Poor levels of preservation meant that few ecofacts were recovered (Appendix 15.3.3). Three soil samples together produced just fifty-seven identifiable charred plant items — almost entirely cereal grains and hulled wheat chaff fragments, including spelt and emmer. Just two charred weed seeds were recovered, together with very small amounts of blackthorn charcoal.

The molluscan evidence is very similar to that recovered from the earlier phase of the settlement (Chapter 4.2.1), and suggests that there was a mixture of dry, short-turfed grassland and damp, well-vegetated areas (Appendix 14). However, *Vallonia excentrica* is less numerically dominant in relation to *V. pulchella*, with approximately equal numbers of each identified, while larger numbers of *Anisus leucostoma* are present. This can tentatively be taken to suggest that the area was slightly wetter in the second half of the 4th century than in the first, or at least that more standing water was present in the ditches.

Apart from a coin hoard (see below) and two nails (Appendix 3.3.2), one of which has a domed, rounded head and may belong to Manning's type 8, a common form of upholstery nail (Manning 1985, 136), pottery was the only artefactual evidence recovered from these features.

The pottery assemblage (Appendix 6.5.42) comprises 362 sherds weighing 3.248kg, with a low average sherd weight of only 9g. Sandy grey ware is the most common fabric, constituting 43% of the assemblage, and includes the cremation urn described above. It was found in a variety of jar forms, while coarse Sandy grey ware was also found as jars and a straight-sided dish. The reduced wares are dominated by roughly equal quantities of Horningsea reduced ware, found in the form of a storage jar, and South Midland shell-tempered ware, which occurs in a variety of jar forms. Several of the South Midland shell-tempered wares have sooty residues on their exterior, reflecting their use as cooking pots. A small quantity of Nene Valley coarse white ware was found, as

well as a single undiagnostic sherd of amphora, probably of Spanish origin. The Nene Valley fine wares include a white ware mortarium, although fine wares only account for a small proportion of the assemblage.

#### *Bourn Airfield coin hoard*

(Fig. 4.1)

A hoard of fifteen coins was recovered with the aid of a metal detector from the ditch marking the western edge of the settlement (SG218, Fig. 4.1; Appendix 2.3). The coins were sufficiently concentrated, despite disturbance from a post-medieval ditch (G58), to suggest that they had originally been buried in a perishable container, such as a leather purse. The hoard consists of ten official coins issued during the 330s and 340s, as well as five imitations copying coin types common during the same period. The segment of the post-medieval ditch excavated adjacent to the hoard contained four further coins (Chapter 5.3.1); three are radiates and date to the 3rd century, but the fourth is another official coin from the 330s, and may have been part of the hoard.

It is likely that the copies were produced in the period 340–346/8, when far fewer low-value bronze coins were issued by the official mints and supplied to Britain than during the previous decade. This gap appears to have been filled by locally-produced copies such as these, a practice that probably ceased only with the introduction of new denominations and types after the currency reform in 348. The *terminus post quem* of the hoard is provided by a coin issued in the name of Constans that was struck at the Trier mint during the years 346–8. It is significant that the hoard does not include any coins produced after the 348 reform, and it is possible that pre-348 coins may have been demonetised, thereby rendering them worthless after the introduction of a new currency and the legal edicts that followed. If this was the case, then it is relatively certain that the Bourn Airfield hoard was buried between 348 and 356 (Boon 1988, 138–9).

#### **4.2.3. Discussion: Bourn Airfield roadside settlement**

##### *Settlement type*

The designation of the farmstead at Bourn Airfield (Site 3) as a roadside settlement assumes the presence of a road to the north of the site, the case for which is presented in Chapter 3.1.1. To summarise, there was probably a Roman precursor to the A428 that ran along the line of a prehistoric ridgeway north of Bourn Airfield, but it was more likely a large trackway than a 'Roman road'. In fact, one piece of evidence for the presence of a road along this line is the alignment of the remains identified at Bourn Airfield, both this settlement and the earlier livestock enclosures (Chapter 3.3.2): their north–south alignment is different to that of any of the pre-medieval remains identified on the other sites, and can most easily be explained by their being perpendicular to an east–west road. However, even assuming the presence of a road there, the classification of these enclosures as a roadside settlement must be tempered by the consideration that no evidence was uncovered for its relationship with the road.

The settlement shares certain characteristics with other roadside settlements known across the country, despite being much smaller and less affluent than most. The difference in size and affluence can be attributed to the status of the road to which this settlement is believed to

have been attached: a minor track would not have attracted the much larger, higher status settlements seen along major roads such as Ermine Street. Roadside settlements of all sizes commonly contained enclosed house plots that faced on to the road, and often had a rear yard that was defined by a second enclosure ditch (Smith 1987, 22–30). However, not all the roadside plots were for houses. Road frontage may have been taxed for properties within Roman towns, but land next to minor roads, such as this one, is unlikely to have been considered such a valuable commodity, enabling livestock enclosures such as G53 to be constructed along them.

Although no building remains were identified within the Bourn Airfield settlement, this is almost certainly the result of plough truncation. The volume of pottery recovered from the ditches is indicative of human occupation; the presence of nails also hints at some form of structure. The spread of material, identified to the north by Kenney in 2000, may be a dark earth deposit, similar to those found at Vicar's Farm (Evans and Lucas forthcoming) and at Childerley Gate (Chapter 4.4.1). The distribution of pottery within the settlement, although not conclusive, does suggest that activity was concentrated towards the northern edge of the site, consistent with a model of roadside house plots with enclosures or yards behind them.

There is also evidence that cemeteries were often located to the rear of roadside house plots (Smith 1987, 117–19). Although only one cremation was identified at Bourn Airfield, this may simply have been the only one that survived the effects of medieval and modern ploughing. The fact that the burial was located in the corner of the enclosure is also in keeping with evidence from other sites in the south of England (Esmonde Cleary 2000, 132).

There is a suggestion that in the later stages of its development (Phase 4) this settlement adopted some of the characteristics of the ladder system seen at Childerley Gate. Its layout certainly appears to have become more regular and linear. How far it extended to the south remains unknown, although the later enclosures G50 clearly represent an expansion of the initial settlement. This expansion, and the simultaneous increase in width of the enclosures, perhaps coincided with the abandonment of the western enclosures G53.

#### *Trade and economy*

Understanding of the settlement's economy is limited by the fact that its domestic core probably lay to the north of the excavated area. However, there is no reason to suppose that it was anything other than a primarily agricultural farmstead. As with the other sites on the road scheme, cattle dominate the animal bone assemblage, although sheep or goats seem to have grown in importance in Phase 4. The faunal assemblage is small, but it is unclear whether this is due to poor preservation or a genuine lack of butchery and consumption waste. Even less evidence was recovered to indicate whether arable cultivation played an important role in the economy — little more than a background level of crop processing debris was identified.

The pottery assemblage recovered from the settlement is primarily utilitarian in character. Fine wares are present, yet they account for a lower proportion of the total than those within the contemporary late Roman assemblage from Childerley Gate (see below). Most of the assemblage

was made locally, with few imported wares, suggesting that the settlement did not have extensive trading links, despite its roadside location.

The coin hoard does at least demonstrate that the inhabitants of the settlement were part of a monetised community. Although Britain has produced a large number of bronze coin hoards dating to the middle of the 4th century, they are less common from Cambridgeshire and northern East Anglia than might statistically be expected (Robertson 2000, xxxi and fig. 21), and hoards from rural sites in general are extremely uncommon. The reason behind the deposition of the coin hoard will inevitably remain unknown, although its placement in the boundary ditch of an enclosed settlement does at least suggest that its deposition was deliberate. The number of hoards within the wider region that date to the middle of the 4th century suggests that the demonetisation of old coinage after the currency reform of 348 is a likely explanation for their burial. People perhaps hoped that a future reform might make them legal tender once again, or too much significance may have been attached to coins for them simply to have been discarded.

### **4.3. Late Roman farmstead at Childerley Gate (4th century: Phase 4)**

(Fig. 4.5)

The original ladder system L12 at Childerley Gate was laid out in the 2nd century in a single undertaking (Chapter 3.5, Phase 3.3). The subsequent changes and additions made during the 3rd century were less structured (Chapter 3.6, Phase 3.4). Enclosures and drove-ways were added to the eastern side of the ladder system; some of them were subsequently redefined. Other enclosures were abandoned, and part of the original ladder system was given over to a large quarry pit. People also started occupying the part of the farmstead that lay within the excavated area, although only one building was identified.

At the beginning of the 4th century, however, the whole farmstead was renovated (L18, Fig. 4.5). The change was not radical, but it was substantial, with the core of the settlement apparently now located within the excavated area. The scale of the work was similar to that involved in the creation of the ladder system — ditches were cleaned out, buildings were erected and pits were dug. Such wholesale settlement reorganisation often sees new alignments adopted and new areas occupied. However, the work at Childerley Gate made considerable use of the existing layout, renewing it rather than changing it. The size of this undertaking once again suggests the presence of a single controlling hand, a possibility which is considered below in the discussion.

Ploughing, however, has destroyed much of the evidence of what took place on this 4th-century farmstead. This is well illustrated by a range of disparate, fragmented features, which are likely to have been contemporary with the remodelled farmstead but which cannot be assigned with any confidence to a specific aspect of its development (L22, Fig. 3.32). The loss of artefactual evidence is demonstrated by the amount of pottery recovered from the subsoil; a hand-picked selection produced fifty sherds, weighing 1.379kg and including substantial portions of individual vessels (Appendix 6.5.30).

Evidence for occupation within the excavated part of the farmstead comes in the form of the large faunal

## A3 FOLDOUT

Figure 4.5 Childerley Gate (Site 5): late 3rd–4th-century reorganisation of the farmstead (L18), with the 4th-century addition of ponds L23

assemblage from Phase 4 deposits (Appendix 13.2.2). The number of cattle and sheep or goat bones increased significantly from Phase 3.4, with cattle bones reaching their peak at this point. Evidence of consumption is obviously far greater on an occupied site than on one used solely for agriculture, and it is noticeable that the faunal assemblage for Phase 4 at Childerley Gate is more than four times as large as the Phase 3.3 collection. Cattle are still the dominant species, yet sheep or goat account for a greater proportion of the assemblage than in Phase 3.4. It is perhaps also significant that six sheep or goat bones were recovered from sieved samples, but only one cattle bone. Sieved assemblages pick out the small bones that are often missed by hand collection, and are therefore less affected by any preservation bias, making them a more reliable indicator of animal numbers. The number of bones from sieved samples is, however, rather small, and too much significance should not necessarily be read into this.

The mandibular and epiphyseal evidence indicates the cattle present in Phase 4 were mostly older adults, more so than those from Phase 5. In contrast, most of the sheep or goats were in the young adult category. A single example of a foetal or neonate sheep or goat fragment was also recovered; this almost certainly represents an infant mortality, and is good evidence for on-site breeding.

Horses continue to be well represented in the assemblage. The Phase 4 collection features a relatively young horse, aged about five years. Two antler fragments from red deer were also recovered, although it is unknown whether they represent the remains of whole carcasses, indicating that venison was part of the diet, or whether they were raw material for antler working. Either way, venison does not seem to have played a major part in the diet during any period of the site.

#### 4.3.1. L18: reorganisation of farmstead at Childerley Gate (Site 5)

(Figs 4.5–4.6)

The beginning of the 4th century saw a reorganisation of the farmstead's whole structure (Fig. 4.5). Much of this involved the retention or re-cutting of existing ditches, although a number of new enclosures were also created. At least one new building was constructed; rubbish pits were dug; an oven was built; a hoard of coins was buried, and a number of less easily understood features were created. The core of the farmstead now seems to be within the excavated area; it is defined by a new, substantial, curving ditch and a retained enclosure (SG86 and SG43, Figs 4.5 and 4.6).

*Retained enclosure ditches: G3.2, G5.2, G7.3 and G11.2* (Fig. 4.5)

The reorganised farmstead retained four pre-existing enclosure ditches. Two were part of the original 2nd-century ladder system (SG32 from G3 and SG20 from G5, Fig. 4.5). Two had been dug in the 3rd century (SG43 from G7 and SG74 from G11). Few artefacts were recovered from the upper deposits within ditches SG32 and SG20, although deposit G11.2 in ditch SG74 was more productive (Appendix 6.5.20).

In contrast, a relatively large assemblage of pottery and other artefacts was recovered from deposit G7.3, although this does include deposits from quarry pit SG45 as well as enclosure ditch SG43. These include two 4th-century bronze coins and four 3rd-century radiates, two of which are barbarous (Appendix 2.4.1), plus four nails and the only hobnail recovered from the road scheme (Appendix 3.3.3).

A total of 551 sherds of pottery was recovered, weighing 6.354kg; it comprises a later Roman mixture of



Figure 4.6 Childerley Gate (Site 5): aerial view of the core area of the 4th-century Roman farmstead

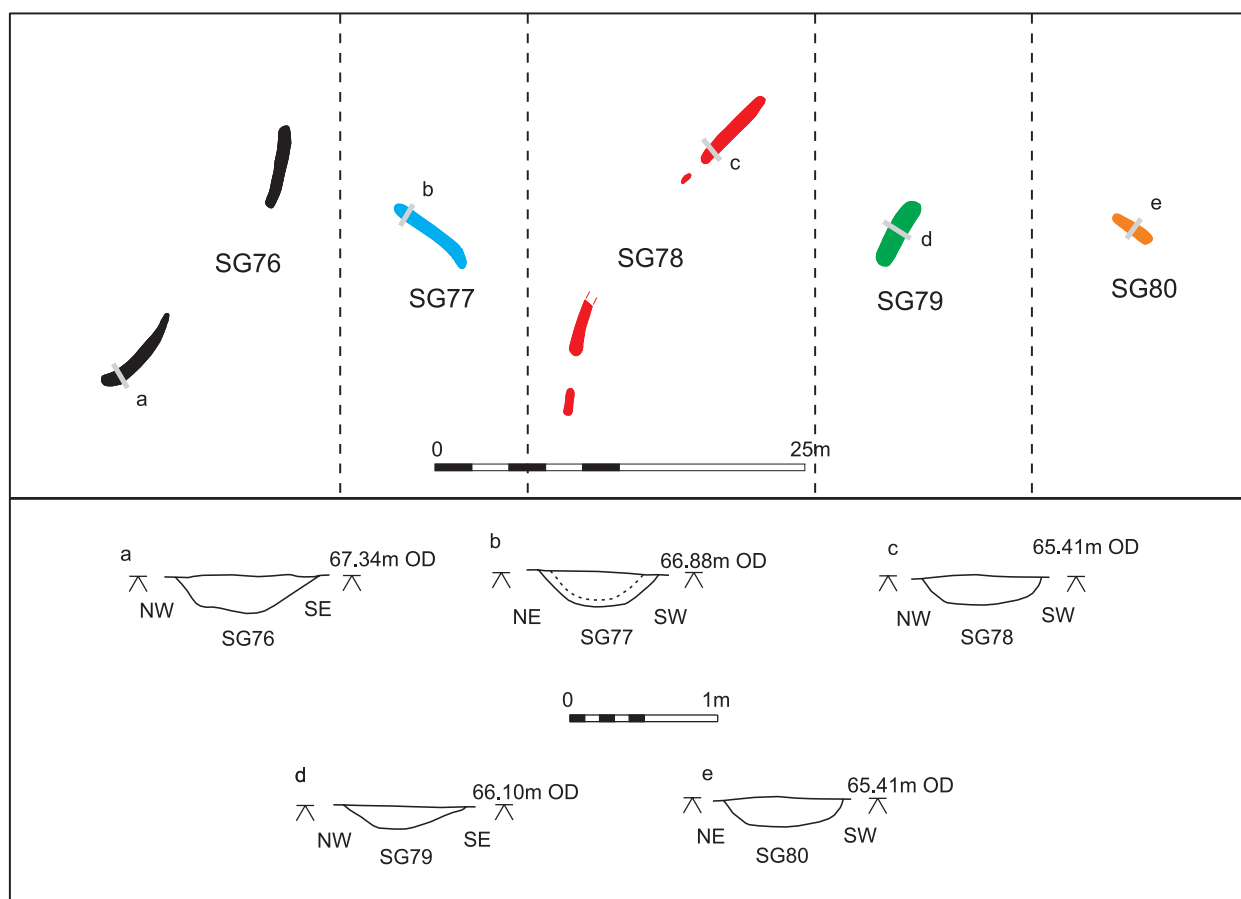


Figure 4.7 Childerley Gate (Site 5): comparative plan of possible structural remains G12 and G13

locally produced coarse wares and pottery imported from regional and international production centres. Utilitarian Sandy grey wares account for 41% of the assemblage by weight (Appendix 6.5.11). They were found in a wide range of vessel types, including jars, flanged and straight-sided dishes, and bowls. The sherds retain little evidence for use. Even soot marks are relatively uncommon, although this may be the result of post-depositional abrasion rather than an indicator of their actual use. Sandy reduced wares are scarce but, like the more common late Roman South Midland shell-tempered wares, occur in a typical range of jar types. Horningsea oxidised and reduced wares were both found in significant quantities; forms include large storage jars. Nene Valley wares are well represented, with colour-coats accounting for 18% of the assemblage. They were found in a wide range of forms: flagons, a beaker, jars, dishes, bowls and a mortarium. The other late Roman fine wares include a small quantity of New Forest colour-coated ware, Oxfordshire red colour-coat and a jar in Hadham red ware. This collection contains three of only five pieces of amphora recovered from the road scheme. Although no rim sherds were found, this material is likely to have come from Dr 20 amphorae from Southern Spain, which were used to import olive oil.

*Partition ditches and possible structural features G12*  
(Figs 3.13, 4.5, 4.7)

Three small ditches, no more than 0.6m wide and 0.2m deep, were dug to partition one of the original 2nd-century enclosures (G5, Fig. 3.13). Their date is slightly uncertain;

they appear to be contemporary with enclosure G15 to the south, yet their relationship with ditch SG85 looks awkward (SG75, Fig. 4.5). It is possible that they in fact pre-date the 4th-century reorganisation of the farmstead, although the partition that they create in the northern corner of enclosure G5 appears to have been respected by the two structural features SG76, suggesting that they were still extant at the time of the reorganisation. No dating evidence was recovered from either the partition ditches or the structural features, although the latter resemble several similar features which can be dated more securely to the 4th century (G13, see below). The two slightly curving, structural features were 5.6–6.7m long, 0.8m wide and 0.25m deep, with concave sides and a flat base (Fig. 4.7, a). Their function is far from clear and is discussed below (Chapter 4.3.3).

*Hearth and possible structural features G13*  
(Figs 3.9, 4.5, 4.7)

This group of features is one of the most problematic elements of the Childerley Gate settlement to interpret. Not all are securely dated but if their suggested association with structures of some type is correct, then their assignment to Phase 4 is probably valid.

An isolated feature at the eastern end of the site was very similar in shape and size to the two structural features in enclosure G5 (SG77, Figs 4.5 and 4.7, b). Its infill was equally sterile. Two similar-sized features were recorded near the centre of the site (SG78, Fig. 4.7, c). They were straight rather than curved and were 3.8–6m long, 0.8m wide and 0.25–0.3m deep. Each had a small associated

feature beyond its southern end that measured 0.8–1.8m long, 0.35–0.55m wide and 0.1m deep. The remaining two examples of this type of feature were SG79, which was 4.85m long, 1.3m wide and 0.35m deep; and SG80, which was 3.05m long, 0.8m wide and 0.15m deep (Fig. 4.7, d, e). The infill of SG79 contained a mid 4th-century Roman coin and more pottery than any of these features. It was located next to a small, shallow pit SG82.

Next to the more northerly of the two features in SG78 were the heavily truncated remains of a hearth or oven (SG81, Fig. 4.5). It survived to 1m in diameter and was only 0.1m deep. The partial remains of a fired clay lining were present. The clay beneath and around the lining had been scorched red, indicating that the feature had been heated to a high temperature. However, very little charred material was recovered from the deposits overlying the lining and the actual purpose of the feature is unknown.

A short beam slot may indicate the position of a building (SG84, Fig. 4.5). It was 3.9m long, 0.3m wide and 0.15m deep, with steep sides and a flat base. Next to it was a small, shallow pit. A larger, L-shaped pit was located within the settlement core (SG83, Fig. 4.5, f). It was 3.4m long, 0.9m wide and 0.55m deep, with a steep profile. It produced 62% of the ceramic assemblage from the features in G13.

The pottery assemblage from these deposits comprises eighty sherds, weighing 1.325kg (Appendix 6.5.21). The relatively high average sherd weight of 17g is due largely to the presence of five large sherds from a Horningsea reduced ware storage jar. Most of the sherds come from Sandy grey ware vessels in a variety of jar forms. Sherds of a Sandy reduced ware vessel were recovered from the L-shaped pit (SG83); a post-firing ‘cross’ graffito at the internal centre of its base may have held a special significance. (A post-firing ‘cross’ graffito was also identified on a Sandy grey ware dish from an isolated pit at Scotland Farm (L19, Fig. 3.9); this one had been marked at the centre of the base both internally and externally, and its location next to a winterbourne further suggests a possible votive significance.) The only Nene Valley wares present are a sherd of grey ware in the form of a jar and a colour-coated body sherd. There are also two fragments of an Oxfordshire white ware mortarium.

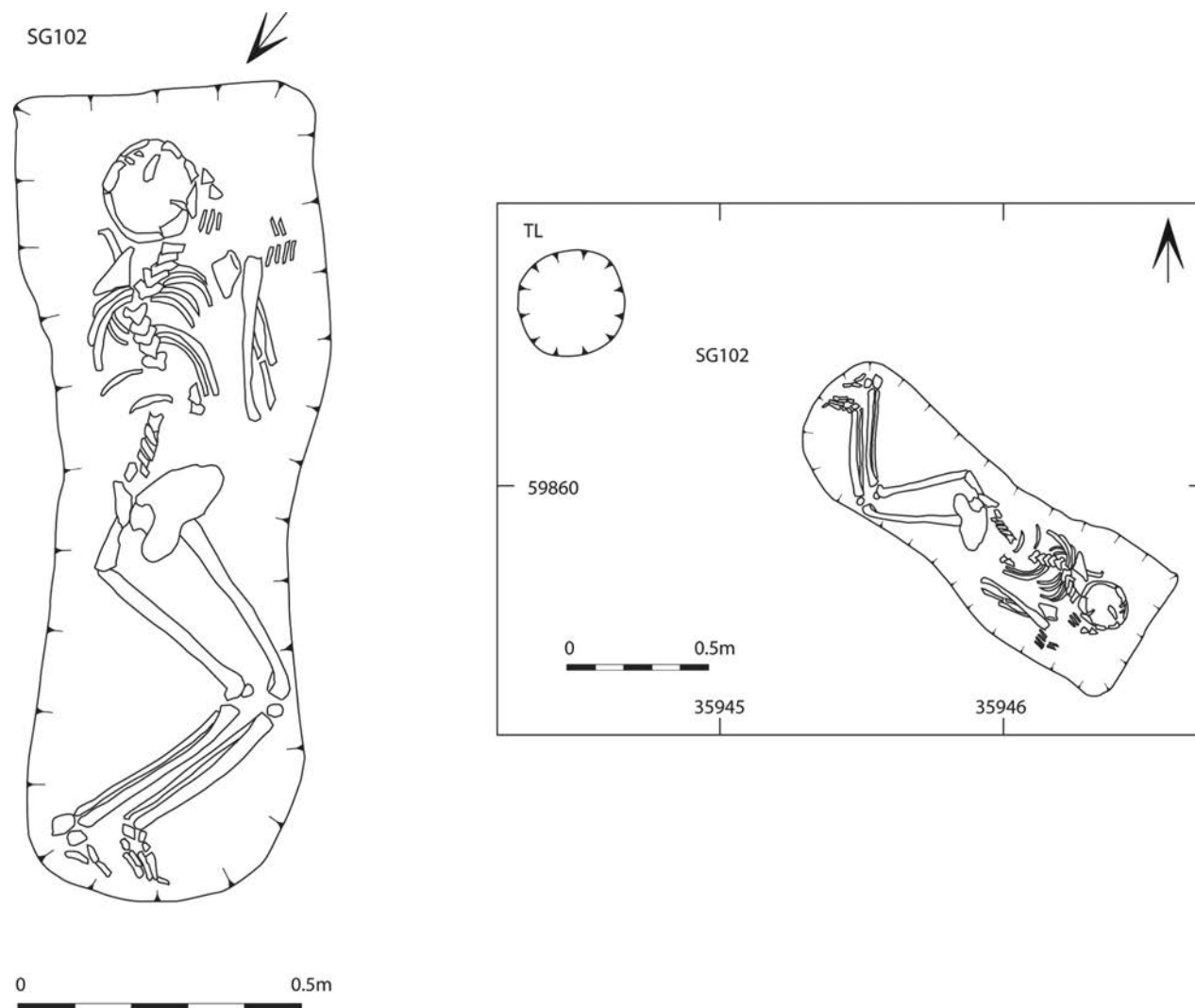


Figure 4.8 Childerley Gate (Site 5): graves of a young woman and a neonate (L18)

*Enclosures, graves, pits and coin hoard G14*  
(Figs 3.29, 3.31, 4.5, 4.8)

Most of the enclosure ditches in G14 made use of existing boundaries, rather than establishing new ones (Fig. 4.5). For example, the north-western side of the 4th-century farmstead, defined by ditch SG85, was in roughly the same place as that of the 2nd-century ladder system. Similarly, ditches SG87 and SG89 were re-cuts of two of the ditches from the original ladder system. Along its eastern half, ditch SG86 also followed the line of earlier ditches, although the course of its western half was new. The largest of these ditches was SG85: it had maximum dimensions of 3.8m wide and 1.1m deep (Fig. 4.5, b and d), although its southern and northern ends, particularly the former, were heavily truncated by ploughing.

It is possible that some of the enclosure ditches described in Phase 3.4 (L15, Fig. 3.31, Chapter 3.6.3) were established during this reorganisation of the farmstead. Stratigraphic evidence suggests that they were earlier than the farmstead's new northern boundary ditch (SG86) but it is possible that these apparent relationships were the result of cleaning out of the ditch rather than its initial digging. At the very least, it seems likely that ditch SG71 was still in use as part of the 4th-century farmstead.

Of the six pits in G14, the largest two were 1.7–1.95m long, 1.2m wide and *c.* 0.4m deep (SG99, Fig. 4.5). A further degree of continuity in the layout of the farmstead is shown by pit SG98, which was effectively a re-cut of an earlier pit (SG55, Fig. 3.29, Chapter 3.6.2) with similar dimensions. However, the most significant pit was cut into the infill of an earlier ditch (SG101, Fig. 4.5). It was 0.7m long, 0.55m wide and 0.15m deep, and contained the Childerley Gate coin hoard (see below). A rectangular area of different colour and texture was just visible in the vertical section of the pit, containing the vast majority of the coins. This probably indicates that the hoard was buried in a rectangular box, made perhaps of wood, which subsequently decayed. The infill of the pit also contained a small, heat-affected fragment of thin, clear, colourless glass (Appendix 3.3.3), a type that was used extensively for tablewares in the 2nd and 3rd centuries (Price and Cottam 1998, 15–16).

There were also two inhumation burials in one corner of the farmstead's northernmost enclosure (SG102, Fig. 4.5). The graves were less than 1m apart. One contained the skeleton of a young adult female, probably in her mid-twenties (Appendix 12.3.2); the other contained a neonate (Fig. 4.8). The neonate grave was 0.4m in diameter and only 50mm deep; the adult grave was 1.4m long, 0.55m wide and a maximum of 0.2m deep. The location of the neonatal burial near the foot of the grave of the young woman makes it tempting to assume a familial relationship between the individuals, but osteological evidence can neither support nor refute this. Archaeological evidence from both urban and rural sites demonstrates that the association of adults with young infants is not straightforward, and diverse burial rites are seen for the neonates and infants of Roman Britain (Pearce 2001, 137).

The pottery assemblage from deposits G14 and G14.1 came mostly from the upper part of ditch SG71, the lower part of ditches SG85 and SG86, and the infill of pits SG99. The assemblage is relatively small — 172 sherds, weighing 1.963kg. Un-sourced, utilitarian Sandy grey wares are the most common fabric, constituting 45% of

the assemblage (Appendix 6.5.23–24). They were found as jars and dishes. Sandy reduced ware was found in the form of a storage jar and a straight-sided dish. Also present are two body sherds of a handmade reduced ware fabric which may be early Saxon in date. South Midland shell-tempered ware is present in the form of a jar. Later fine wares are well represented. The majority are Nene Valley colour-coats, found in a variety of forms. Other late Roman fabrics include Hadham red ware and Oxfordshire red ware.

As well as the coin hoard, a further eight coins were recovered from the features in G14. Apart from a single bronze coin dating to 364–378, they are all late 3rd-century radiates, six of which are barbarous (Appendix 2.4.1). The other non-ceramic artefacts from these deposits comprise two nails, a sinuous, tapering strip of copper alloy, possibly an off-cut, and a plain cast annular ring (OA11). Such rings had a wide range of uses, but examples have been found worn in burials as a finger ring (Crummy 1983, fig. 50 Nos. 1749 and 1755), so their function as personal ornament cannot be ruled out (Appendix 3.3.3).

Although five soil samples were taken from these deposits, hardly any plant remains were recovered from them. The molluscan assemblage is dominated by the freshwater snail *Anisus leucostoma*, although relatively large numbers of *Oxychilus cellarius* and a smaller number of *Trichia striolata* are also present. These indicate that the ditches from which they were recovered were seasonally wet and had well-vegetated margins (Appendix 14).

Childerley Gate coin hoard SG101.2

A hoard of at least 4,487 late 3rd-century barbarous radiates was found in pit SG101 (Appendix 2.2). A representative 20% sample of the coins were cleaned, weighed, measured and identified (Table 6).

Although the pit had been truncated by ploughing, distribution of the coins within the hoard, as revealed by its excavation in four spits, suggests that the hoard was recovered substantially intact. Very few hoards have been recovered from Romano-British rural settlements, and even fewer as part of a controlled archaeological excavation, making the Childerley Gate hoard an important archaeological and numismatic find.

All of the coins examined from the hoard are barbarous radiates, *i.e.* imitations of Roman coins produced during the last quarter of the 3rd century. These copies are found mainly in Britain, France and Germany west of the Rhine, where they appear in large quantities on sites and in hoards (Reece 1995; Robertson 2000; Haupt 2001). It is likely that most barbarous radiates were struck in order to make up a shortfall in the supply of coins sent to Britain and the north-western provinces of the empire in the years after the emperor Aurelian's currency reform in 274. This is when a new, higher standard denomination was introduced to replace the heavily debased coinage of the 260s and particularly the 270s. The provincial populations responded to this shortfall by producing their own small change, and the issuing of barbarous radiates continued unabated for some years. It probably ceased only when coin supply once again met provincial demand, possibly after Carausius usurped imperial power in 283, and almost certainly by 296, when Britain was reunited with the empire and the radically new empire-wide



	<i>as Gall.</i>	<i>as Sal.</i>	<i>as Cl. II</i>	<i>as Div. Cl</i>	<i>as Post.</i>	<i>as Vict</i>	<i>as Tet. I</i>	<i>as Vict./Tet. I</i>	<i>as Tet. II</i>	<i>as Tet. I/Tet. II</i>	<i>radiate bust</i>	<i>illegible</i>	<b>Total</b>
as Pietas Augustor			3				30		28	17	15		<b>93</b>
as Salus			1			20	15	2	18	1	23		<b>80</b>
as Pax			1		1	12	12	1	11		33		<b>71</b>
as Altar			16	23		3			1		14		<b>57</b>
as Fides			1			13	8		8		18	1	<b>49</b>
as Sol						21			4		11		<b>36</b>
as Virtus	1					4	6		12		13		<b>36</b>
as Spes	1		1			2	8		3	1	7		<b>23</b>
as Hilaritas							7	1	5	2	4		<b>19</b>
as Providentia					2	6	1	1	1		2		<b>13</b>
as Pietas						6				1	3	1	<b>11</b>
as Spes Publica			1			1	4		2	1	2		<b>11</b>
as Victoria	1		1				4		3		2		<b>11</b>
as Eagle				6							1		<b>7</b>
as Aequitas			2						1		1		<b>4</b>
as Laetitia						1	2		1				<b>4</b>
as Pax						3					1		<b>4</b>
as Princeps Iuvent.									4				<b>4</b>
as Fortuna						2			1				<b>3</b>
as Trophy			1								1		<b>2</b>
as Felicitas		1											<b>1</b>
as Stag/gazelle	1												<b>1</b>
as Temple						1							<b>1</b>
stylised Figure	1		2	3		15	24	3	16	2	182	7	<b>255</b>
illegible			1			2	5	1	10	1	62	22	<b>104</b>
<b>Total</b>	<b>5</b>	<b>1</b>	<b>31</b>	<b>32</b>	<b>3</b>	<b>112</b>	<b>126</b>	<b>9</b>	<b>129</b>	<b>26</b>	<b>395</b>	<b>31</b>	<b>900</b>

Table 6 The Childerley Gate coin hoard – identification of the 900 cleaned coins

**Key:** as Gall.: as Gallienus; as Post.: as Postumus; as Sal.: as Saloninaas; Vict.: as Victorinus; as Cl. II: as Claudius II; as Tet. I: as Tetricus I; as Div. Cl II: as Divus Claudius II; as Tet. II: as Tetricus II.

currency that had been introduced by the emperor Diocletian two years earlier (Boon 1988, 130).

The first barbarous radiates were good quality copies of their prototypes, but the quality and size of the copies decreased as the need to produce very large quantities of these imitations continued. Some of the latest examples measure only a few millimetres across, and their increasingly stylised design means that their sole recognisable feature is the radiate crown on the obverse (Boon 1988, 126–9). This decrease in size and quality can be seen in the Childerley Gate coins, 90% of which have diameters of 13mm or less, and weigh less than 1g, placing them in the category of ‘minims’. Most of them are square or rectangular with rounded corners, rather than round, as a result of their mode of manufacture and the haste with which this was undertaken.

Generally, the coins survive in remarkably good condition, and most bear some traces of their obverse and reverse details. The dies used, however, were considerably larger than the flans on which the coins were struck, and in virtually every instance, the coin bears only a part of the image engraved into the dies. Despite this, 474 of the Childerley Gate coins were identified to specific emperors on their obverses, while reverse types were recognised on 541 coins (Table 6). It is clear that most of the barbarous radiates from this hoard were imitating coins of the Gallic emperors Victorinus, Tetricus I and Tetricus II. The

sacrificial implements of the Tetrican type PIETAS AUGUSTOR are the most commonly imitated reverse on the Childerley Gate coins, followed by Salus, Pax, Consecratio (altar and eagle types), Fides, Virtus and Sol. Therefore, the barbarous radiates from this hoard only imitate the obverses and reverses of coins struck up to 274. The coins could, in theory, have been buried at any point between this date and the replacement of radiates with new coinage, under either Carausius in 283 or, more probably, the Tetrarchy in 296.

Hoards of late 3rd-century coins are extremely common from Britain (over 250 have been recorded to date), and examples are known from almost all parts of the country (Robertson 2000, xxxi, figs. 14 and 15; Reece 2002, 70). However, there are significant differences between these hoards, and it is likely that their burial and loss resulted from a variety of factors. Most hoards of this date consist of official radiates, with various proportions of barbarous coins, some very large indeed (Besly and Bland 1983; Davies 1992). Hoards such as the Childerley Gate one, which consist entirely of barbarous radiates, often minims, are less common and are poorly understood. Davies observes that minim hoards are often smaller than those containing official radiates, most consisting of fewer than 500 coins (Davies 1992, 215–8). Only three previously known hoards contain more than 2,000: the hoard from Worthing consists of 2,068 minims; and the

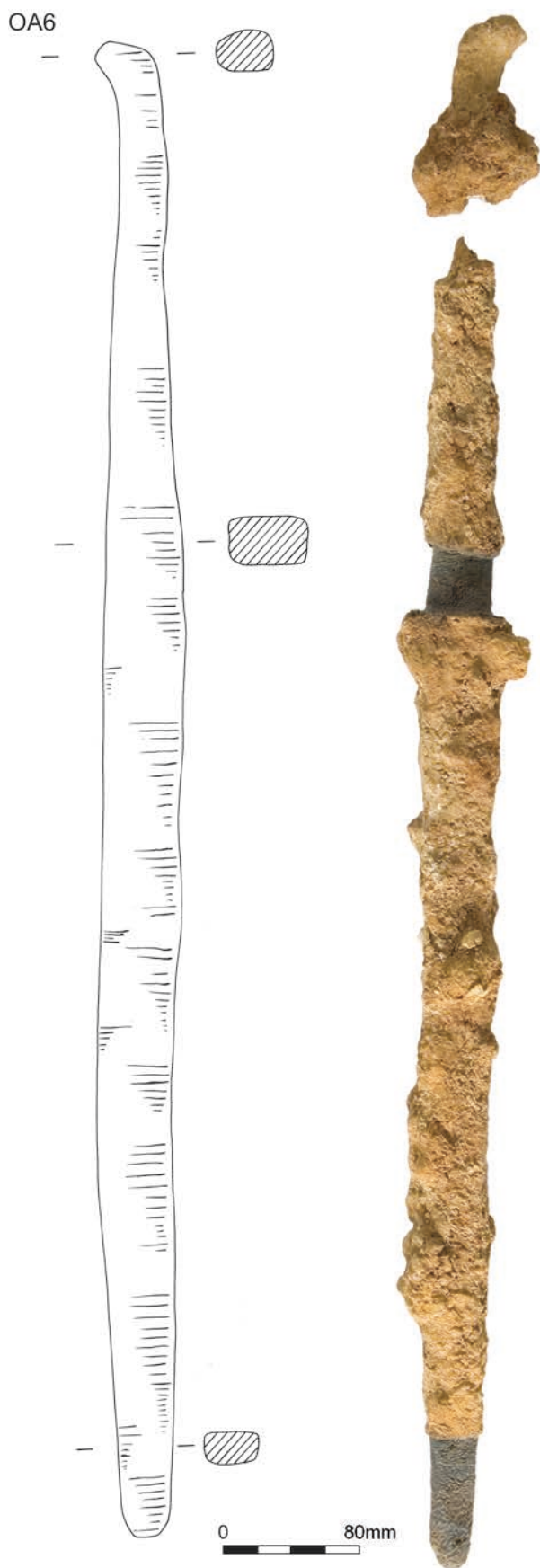


Figure 4.9 Childerley Gate (Site 5): tanged bar share from the base of enclosure ditch G16

Hayle and Witchurch hoards are both recorded as containing 'some thousands' of these coins. The Childerley Gate hoard is, therefore, the largest hoard of barbarous radiate minims known from Britain.

#### *Enclosure G15*

(Fig. 4.5)

Only the very northern corner of this enclosure was revealed within the excavated area at Childerley Gate (Fig. 4.5, a). The ditch seems to have suffered heavily from plough truncation, as it was only *c.* 1.1m wide and 0.2m deep. Other ditches in this area, notably SG20 and SG85, also became significantly smaller at the southern edge of the site. This may indicate that there was originally a slight rise here, which has subsequently been ploughed flat. No artefacts or ecofacts were recovered from the infill of this ditch.

#### *Enclosure G16*

(Figs 4.5, 4.9, 4.10)

Like enclosure G15, only the very northern corner of enclosure G16 was revealed within the excavated area. The enclosure ditch had been partially re-cut. The earlier ditch was 1.4m wide and 0.4m deep; its replacement was more substantial: 1.8m wide and 0.85m deep, with a steep profile (SG92 and SG91, Fig. 4.5, c).

A 3rd-century radiate was recovered from the upper deposit within each ditch (Appendix 2.4.1). The upper deposit of ditch SG92 also contained a building fitting in the form of a T-clamp with a clenched tip. The primary infill of ditch SG91 contained a tanged bar share (Fig. 4.9, OA6), which was lying across the base of the ditch, and appears to have been placed deliberately as a votive offering. The bar share conforms to Rees' type 2A and, although there is damage to the tip, its surviving length of 876mm compares well with some of the larger shares recorded from other sites (Rees 1979, 57–9, 269–86). The eighteen examples quoted by Rees were all parts of hoards, and mostly occurred with an equivalent number of plough coulter (Rees 1979, 58). A tanged bar share and coulter were found nearby at Lower Cambourne, also placed at the base of an enclosure ditch (Wessex Archaeology 2003, 24). The majority of examples date to the 4th century (Appendix 3.3.3).

The pottery recovered from this enclosure comprises sixty-four sherds weighing 488g, most of which came from ditch SG92 (Appendix 6.5.25). Sandy grey ware is the most common fabric, occurring as jars and a shallow dish or platter. Of more interest is an unusual micaceous Sandy grey ware flask (Fig. 4.10, <P67>), for which no parallels have been found. The flask seems to be imitating a type of vessel more commonly produced in the medium of glass at this time. The fine wares from this assemblage include Nene Valley colour-coats, in the form of flanged and straight-sided dishes, and two small sherds from an Oxfordshire red colour-coat mortarium.

#### *Building and rubbish pits G17*

(Fig. 4.5, 4.11, 4.12)

A building and five rubbish pits were located within the core of the 4th-century farmstead, in the area enclosed by ditch SG86 (G17, Fig. 4.5). Four of the pits were clustered to the west of the building; one was dug into the infilled quarry pit SG45.

The surviving remains of the building comprised three short beam slots, which were 1.55–3.9m long, 0.35–0.55m wide and 0.15–0.2m deep (SG97, Fig. 4.11, d). The pattern of silting within the slots indicates that they originally held horizontal beams that were 0.25–0.35m wide. Too little survived to determine the overall dimensions of the building.

The isolated pit to the west of the building was 3.05m long, 2.85m wide and 0.6m deep, with concave sides and a flat base (SG93, Figs 4.11, b and 4.12). The other large pit (SG95) in this area was 3.7m long, 2m wide and 0.6m deep, with concave sides and an uneven base; it had been dug through the infill of two much smaller pits (SG94, Fig. 4.11, a). The pit dug into the infilled quarry pit had been protected from modern plough truncation. It was 6.85m long, 3m wide and 1.05m deep, with a concave profile (SG96, Fig. 4.11, c).

The deposits within the three larger pits alternated between rubbish dumps and capping layers. The capping layers in pit SG96 were the most substantial; one included a number of large stones, and the pit was sealed with a layer of redeposited marl. Most of the rubbish dumps within the pits were rich in artefacts. The greenish colour and distinctive smell of some of the deposits suggested that the features were cesspits, although they did not contain mineralised plant remains. However, a socketed mortise chisel (*cf.* Manning 1985, 23 and pl.10 nos. B35–B36) was recovered from the bottom of pit SG95, with what appears to be a small amount of mineralised wood (Appendix 3.3.3). Manning comments that the mortise chisel is the most common form of Roman chisel, and suggests that it was frequently used as a general-purpose tool.

A relatively large assembly of pottery was recovered from these features — 235 sherds, weighing 3.975kg (Appendix 6.5.26–27) — with the majority coming from pits SG93 and SG95. The relatively high average sherd weight of 17g suggests that the rubbish was dumped straight into the pits, rather than being left to accumulate elsewhere first. Utilitarian Sandy grey ware is the commonest fabric, accounting for 54% of the assemblage. It occurs in the form of jars, dishes and bowls. One of the basal sherds has a post-firing hole drilled in its centre. A few sherds are still sooty from use over an open fire, and although most are undecorated, a few examples of burnished line decoration have survived. Other types include South Midland shell-tempered ware, Horningsea reduced ware and paler Sandy oxidised ware. The Nene Valley wares include both colour-coated and coarse white wares in the form of jars. Two Oxfordshire wares were found: a red ware mortarium with a white colour-coat, and two examples of white ware mortaria. These three mortaria, largely absent from earlier periods, form one of the largest collections of this vessel type within the overall assemblage.

Apart from the mortise chisel, the non-ceramic artefact assemblage includes a small fragment of thick, translucent, ‘blue-green’ glass from the primary infill of pit SG93, probably deriving from a prismatic bottle of 1st- to late 2nd-century date (Appendix 3.3.3). A bronze coin was also recovered from the uppermost deposit within SG93, dated to 388–94 (Appendix 2.4.1).

Soil samples taken from the lower deposits within the three larger pits produced very different results (Appendix 15.3.3). Little material was recovered from pit SG96. Pit



Figure 4.10 Childerley Gate (Site 5): micaceous Sandy grey ware flask of an unusual design, from enclosure ditch G16

SG93 produced one of the larger assemblages of charred plant items from Childerley Gate, with moderate numbers of cereal grain, chaff fragments and weed seeds. A variety of charcoal was also recovered: mainly oak from narrow roundwood, probably from an area of managed woodland, and hawthorn and blackthorn charcoal, perhaps representing burnt hedgerow trimmings (Appendix 16, Table A49).

The most productive sample was from pit SG95, with an estimated total of 14,096 quantified items. This assemblage offers two points of interest beyond its being composed primarily of spelt wheat. The first is the presence of an estimated 144 sprouted cereal grains, with coleoptiles extending to between half and the full length of the grains. Grains were sometimes deliberately sprouted to be used for brewing beer, and it is possible that they were being used for this purpose, although the fact that germinated grains account for only an eighth of the total makes it possible that this material simply represents wet and accidentally germinated grain. The second point of interest is the ratio of glumes to grains, which is approximately 11:1. This does not take into account the hundreds of cereal fragments that were not counted, yet even the addition of these would not come close to producing the 1:1 ratio that would be expected if the material represented the residues of a burnt storage deposit, with the hulled grain being stored in their spikelets. Given the significantly better preservation of the chaff than that of the grain, it is possible that they are from two different episodes, becoming mixed together in the pit. The chaff may have been accidentally burnt during de-husking or burnt as tinder once separated, while the grain may also have been burnt during de-husking, or as the result of cooking accidents.

#### 4.3.2. L23: construction of ponds at Childerley Gate (Site 5)

(Figs 3.29, 4.5)

The construction of ponds within a farmstead is seen by some as an indication of an increase in the number of animals, particularly cattle (Mackreth 1996, 227). In the 3rd century, a pond had been constructed on the eastern edge of the farmstead (SG61, Fig. 3.29, Chapter 3.6.2). Two more ponds were dug in the 4th century, at the eastern and western edges of ditch SG86 (G18, Fig. 4.5). The eastern one was located immediately north of pond SG61, and may have been a direct replacement. It was 5.9m long,

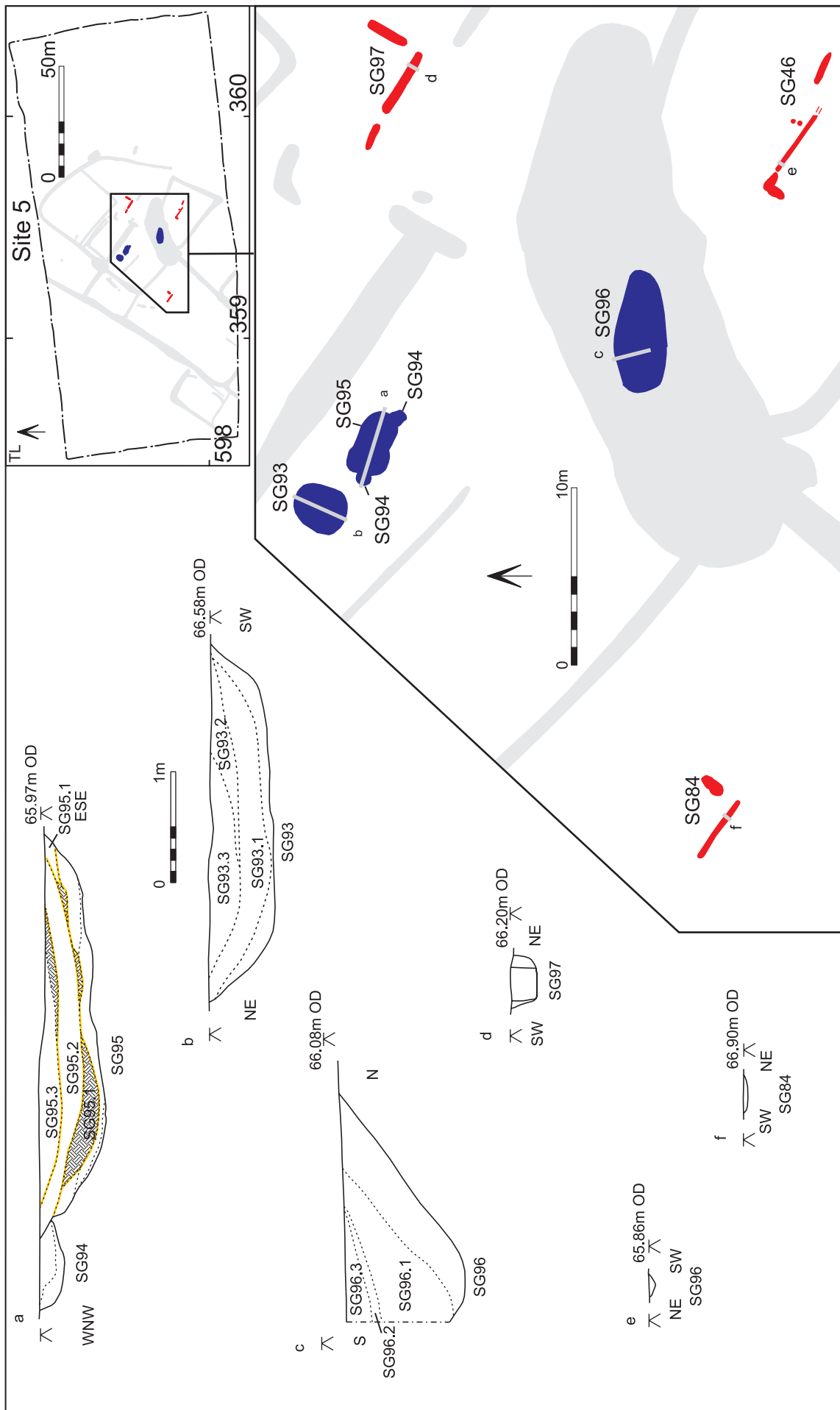


Figure 4.11 Childerley Gate (Site 5): late Roman rubbish pits and buildings within settlement area L18, including the retained Phase 3.4 building SG46



Figure 4.12 Childerley Gate (Site 5): late Roman rubbish pit SG93

3.8m wide and 0.6m deep, with a similarly shallow profile to that of the earlier pond. The western pond was larger, measuring 9m long, 5.2m wide and 0.9m deep, with a steep profile.

The only artefacts recovered from these ponds are ten sherds of Sandy grey ware pottery, weighing just 40g. This small assemblage is extremely abraded, with a very low average sherd weight of only 4g, indicating that the pottery was probably re-deposited and may well have been trampled by animals (Appendix 6.5.28).

#### 4.3.3. Discussion: Childerley Gate farmstead

##### *Settlement morphology, location and environment* (Figs 3.13, 4.5, 4.7)

The reorganisation of the Phase 3.4 farmstead mostly reused existing boundary lines, and retained several ditches (Fig. 4.5), some of which had been established *c.* 150 years earlier with the original layout of the ladder system (L12, Chapter 3.5.2). Others had been grafted on to the side of the ladder system as it developed (Chapter 3.6).

The original ladder system had comprised two large enclosures, linked by a tightly structured block of small fields, with a drove-way or trackway on either side. The core of the settlement appears to have been located to the south of the excavated area, possibly within the unexposed part of the southern enclosure. The 3rd-century development of the ladder system (Chapter 3.6.1) saw the construction of a building (SG46) within enclosure G7,

which is thought to have survived into the 4th century. It is unclear to what use the building was put. However, it was located within an area that produced a relatively large assemblage of pottery and a smaller one of non-ceramic artefacts, suggesting that it may have been associated with domestic activity. Whether it represented the core of the settlement during the 3rd century is debatable, but it does at least suggest that there was some form of occupation activity within the southern half of the site.

In the 4th century, the focus of occupation activity within the farmstead moved north (Fig. 4.5), continuing an apparent northward progression in the location of the settlement's core (Chapter 3.5.4). Too little remained of building SG97 to say definitively whether or not it had a domestic function. However, the majority of Phase 4 artefacts were recovered from the area defined by ditches SG43 and SG86, at the centre of which lay building SG97. Three large rubbish pits or cesspits were located nearby, and it does seem likely that this area was primarily domestic in character.

While the domestic core of the settlement was moving north, the agricultural areas of the farmstead were also changing. The 2nd-century block of small fields (G3, Fig. 3.13) was replaced in the 4th century by a series of much larger enclosures. This transition may have begun in the 3rd century, as the shallower internal ditches silted up, but it was only formalised at the beginning of the 4th century. In contrast, the original southern enclosure G5 was partitioned into smaller parcels. It is unclear exactly when

this happened; it may have been contemporary with the 4th-century reorganisation of the farmstead or it may have preceded it.

While the core of the farmstead was domestic, the limited number of artefacts recovered from the enclosures to the south-west suggests that they were agricultural. Beyond this, however, their use is unclear. A number of the enclosures lay largely beyond the southern limit of excavation and soil samples taken from the ditches produced little environmental evidence. The exceptionally large assemblage of charred plant remains from pit SG95 indicates that such material could survive within the Childerley Gate farmstead but, overall, very little direct evidence for arable cultivation was found. The presence of the bar share within enclosure ditch G16 strongly suggests that crops were being grown on the site, yet there is no way of knowing exactly where.

Interpretation of the short linear features identified across the site is also problematic (G12 and G13, Fig. 4.7). They were all of a similar size and had clear terminals, indicating that they were not just the truncated remains of boundary or enclosure ditches. The deposits within them were generally sterile. In the absence of any obvious interpretation, it is suggested that these features were associated with buildings, perhaps being located across the entrance to an open-fronted structure in order to keep animals out. Hearth or oven SG81 was located next to one of these features, perhaps indicating an industrial function. The more isolated examples, such as SG76 and SG77, which produced no artefactual evidence for nearby domestic or industrial activity, may have been outlying barns for storing animal fodder or crops. The evidence for this interpretation is far from conclusive; yet the presence at Childerley Gate of domestic activity within a sizable farmstead would surely have required more buildings than the ones that can be positively identified.

#### *Coins and monetisation*

As well as the coin hoard, a total of sixty other coins were recovered from the Childerley Gate farmstead (Appendix 2.4.1). It is striking, however, that only three were recovered from features earlier in date than the 4th century. The rate of coin loss at the beginning of the 4th century places the farmstead above the notional average for a Romano-British site (Appendix 2.4.1, Fig. A41), yet the inhabitants do not appear to have operated a monetised economy before this date.

Hoards of barbarous radiate minims are often found at the periphery of the 'Romanised' areas of Britain, and could have been assembled by non-coin-using rural communities after coming into contact with societies more familiar with the use of coinage as a medium of exchange, most notably in towns. The Childerley Gate hoard was deposited by just such a rural community as envisaged by Davies (1992). The fact that nearly all of the sizable assemblage of coins recovered from the farmstead were deposited at the same time as, or later than, the hoard's deposition suggests that the farmstead's inhabitants were just starting to become familiar with using coinage at the time when the hoard was buried.

In the past, historical events have been cited as reasons for the burial of large numbers of late 3rd-century hoards. These include raiders, and the aftermath of the civil war that ended with the defeat of the last Gallic emperor, Tetricus I, by Aurelian in 274 (Robertson 1988, 15 and

29–30). However, these events are unlikely to offer a satisfactory explanation of this hoarding phenomenon because they do not take into account the considerable variation between hoards of this period, or their distribution patterns. The most well-received alternative proposes that the production of barbarous radiates was the result of widespread opposition to the new, heavier coins introduced by Aurelian's monetary reform, also in 274 (Mattingly 1951; Mattingly 1963). Furthermore, Mattingly suggests that the steep rise in late 3rd-century hoards was caused by the efforts of the emperor Probus to enforce Aurelian's reform, which, it is suggested, drove the 'bad' money (*i.e.* pre-reform and barbarous radiates) into the ground in hoards. It should be noted, however, that the existence of barbarous radiates copying coins of Probus, as well as the presence of imitations in hoards closing in the 280s and early 290s, means that the cause of this rise in hoarding probably occurred at a later date in the 3rd century.

The defeat of Allectus by the junior emperor Constantius I in 296 led to the reunification of Britain with the rest of the Roman Empire after thirteen years of separation. One of the many consequences of this momentous event was that the currency being used at that time had been swept aside in the rest of the empire two years earlier by the monetary reforms introduced by the emperor Diocletian (Constantius I's senior colleague). Furthermore, it is clear from the numismatic evidence that Britain was not given long to adjust to this new situation: a mint established in London after Allectus' defeat immediately began issuing post-reform coins. The earlier radiates do not appear to have been compatible with Diocletian's reformed currency, and they quickly seem to have disappeared from circulation. Therefore, although the Childerley Gate hoard could have been buried at any point after 274, the archaeological and numismatic evidence suggests it is more likely that this took place at the very end of the 3rd or the beginning of the 4th century, perhaps twenty to thirty years after the hoard's *terminus post quem*.

The circumstances of the Childerley Gate hoard's burial would seem to support such an explanation. Burying over 4,000 coins within a settlement would not appear to be the best place, if the intention was to conceal these objects from raiders or marauding soldiers. Although the contention that these coins were buried because they had been demonetised and were therefore economically worthless might seem irrational to the modern mind, we should recognise the dangers of imposing contemporary ideas and values onto the ancient world. Furthermore, the fact that something is irrational does not automatically stop it from happening.

We know that a large quantity of low-value copper coins was buried in a pit dug on the Childerley Gate farmstead, that the pit was probably dug specifically for this purpose, and that the coins were probably contained within a box. These facts suggest that, while the coins may have been worthless as currency after 296, the people who deposited the hoard did not view it as something merely to be discarded. Perhaps the hoard's owners (whether individuals or a group) hoped that their coins might once again come to have 'real' value in the future, and were worth keeping in a safe place just in case (Mattingly 1963, 26; Reece 2002, 77 and 95)? Alternatively, their nature as coins may have made them too special simply to be thrown

away when they were no longer able to fulfil their original monetary function. This is, of course, pure speculation, but the exercise highlights the importance of archaeologically-recovered hoards in furthering our understanding of coin use and disuse in Roman Britain.

#### *Socio-economic structure*

(Fig. 4.11)

The economy of the Childerley Gate farmstead, particularly in the 4th century, seems to have been based on livestock. Cattle were the dominant species, both numerically and in terms of their value; it should be borne in mind that even though the farmstead does not appear to have been particularly affluent in terms of material wealth, cattle themselves were a valuable commodity, and may have served as an indicator of status.

It is hard to tell whether the lack of evidence for arable cultivation is genuine, or simply a product of poor preservation conditions. If the farmstead was a self-sufficient unit, then it would undoubtedly have been growing its own crops, although it should be noted that the apparent surplus of grain produced by nearby sites such as Vicar's Farm (Evans and Lucas forthcoming) may have meant that the farmstead was able to generate a sufficient surplus from its pastoral economy to buy in supplies of grain from elsewhere. As only part of the farmstead was excavated, it is possible that crops were being grown beyond the area of excavation. Although the north-eastern extent of the farmstead was revealed, it continued beyond the south-western edge of excavation, which is where the bar share was found.

If the farmstead were part of a much larger estate, then a degree of specialisation would have been possible. The original layout of the ladder system in the 2nd century had a more regular structure than is likely to have been produced by an individual community, perhaps suggesting external control in its organisation. Although there is no direct evidence to indicate that the land around Childerley Gate was part of either a villa estate or an imperial estate, there are signs in the surrounding landscape that it was not divided up solely among local communities. The field systems between Caxton Gibbet and Childerley Chapel (Chapter 3.2) suggest a structuring of the landscape over a distance of several miles. This idea is reinforced by evidence from Cambourne (Wessex Archaeology 2003, 97); it has also been suggested that much of the fens to the north were part of an imperial estate (Malim 2005, 125–9). In contrast, the settlements at Bourn Airfield, Ash Plantation, Cambourne (Wessex Archaeology 2003) and Caldecote Highfields (Kenney 2007) were more characteristic of native farmsteads, in a landscape that changed little between the Iron Age and the Roman period (Chapter 3.3). Even in the Roman period, the buildings in these farmsteads tended to be circular, whereas the buildings identified at Childerley Gate were rectangular (Fig. 4.11).

The reorganisation of the Childerley Gate farmstead at the beginning of the 4th century also bears the hallmark of a single authority, able to implement a widespread programme of change. Previously, the inhabitants seem to have been content to add or abandon enclosures and drove-ways on a piecemeal basis. The decision completely to reorganise the whole farmstead may even indicate that a new group of people came to live at the settlement. If so, a clue to their identity can perhaps be

gleaned from artefacts recovered from the site: two of the non-ceramic artefacts — a cup- or bell-shaped stud from a Phase 5 deposit and a small spearhead from Phase 3.3 (Appendix 3.3.3) — suggest a military presence. This can only be a tentative inference, as both objects also have non-military associations. However, a small number of items that frequently have a military connection were also found nearby at Vicar's Farm (Evans and Lucas forthcoming). A military connection is at least plausible: roads such as Ermine Street to the west were built primarily to enable the movement of troops around the province, and the hinterland of towns such as Roman Cambridge may well have had a role in supplying the army (Evans and Lucas forthcoming).

The combination of a possible military presence and the substantial reorganisation of the farmstead at the start of the 4th century, at about the same time as the Childerley Gate coin hoard was deposited, could be taken as circumstantial evidence for the farmstead being granted to one or more veteran soldiers. Although there is very little evidence for the settlement of veterans in Britain, occasional military diplomas have been found at places such as London, Vindolanda and Wroxeter, recording the privileges due to auxiliary troops who had completed their full period of service (Birley 1983). There is also a historical reference regarding the settlement of veterans in the provinces during the 1st century AD (Tacitus, *Annals* XIV.27):

*veterani Tarentum et Antium adscripti non tamen infrequentiae locorum subvenere, dilapsis pluribus in provincias in quibus stipendia expleverant*

veterans who had been granted a settlement at Tarentum and Antium did little to help populate these ghost towns, however, as many of them slipped away to the provinces where they had spent their service.

If veterans preferred to be settled in the provinces where they had served, then this suggests that a large number may have settled in Britain once their time in the army had expired.

The settlement of veterans was a problematic issue for the Roman Empire, as large numbers of men expected to be given either money, or a piece of land and the means to establish a farmstead once they had completed their service. Keppie (2000, 311–12) comments that the trend in the 2nd and 3rd centuries for emperors to favour cash grants had been reversed by the 4th century, citing an imperial pronouncement from 320 (*Codex Theodosianus* 7.20.3):

*veterani ... vacantes terras accipiant easque perpetuo habeant immunes et ad emenda ruri necessaria pecuniae in nummo viginti quinque milia follium consequantur boumque quoque par et frugum promiscuarum modios centum. Qui autem negoti gerendi habuerit voluntatem huic centum follium summam immunem habere permittimus.*

veterans ... should receive vacant lands and have them tax-exempt in perpetuity, along with 25,000 *folles* towards the purchase of the equipment necessary for the countryside, a pair of oxen, and 100 bushels of mixed seeds. The veteran who has resolved to go into business may receive 100 *folles*, tax-exempt.

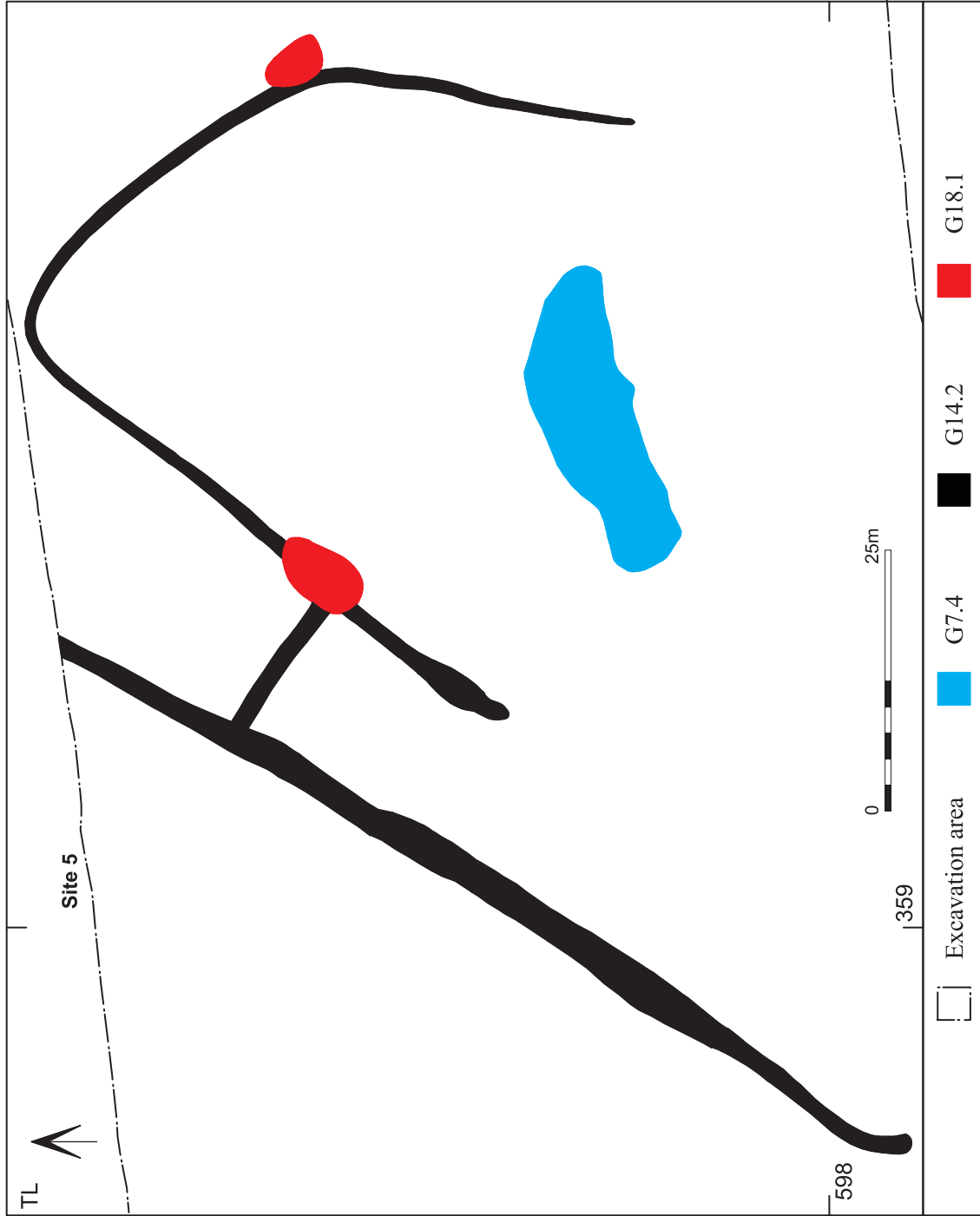


Figure 4.13 Childerley Gate (Site 5): sub-Roman dark earth deposits within earthwork hollows (L24)



No mention is made of how much land was granted to each veteran, although the quantity of seeds suggests an area of approximately 10ha (Duncan-Jones 1990, 125–6). Duncan-Jones comments that this figure is generous in relation to the amount of land allotted to individuals earlier in the empire, but that the size of the allotment may be explained by the marginal nature of the land.

Although the land at Childerley Gate was already in use at the beginning of the 4th century, it may not always have been possible by this date to make grants of unoccupied land. Even in the 1st century, Tacitus records that native farmers at Colchester were displaced to make way for colonists (*Annals* XII.32). If the farmstead at Childerley Gate had previously belonged to an imperial estate, then the land may have been deemed available to be granted to a military veteran.

The idea that the farmstead at Childerley Gate became a veteran settlement at the beginning of the 4th century, having previously been part of an imperial estate, is only speculation. However, veteran settlements must have been common in Britain, despite the lack of archaeological evidence for them, and this theory does at least fit the circumstantial evidence from Childerley Gate.

#### **4.4. Sub-Roman agricultural settlement at Childerley Gate (5th century: Phase 5)**

The cessation of Roman control over Britain at the turn of the 5th century left far-ranging changes in its wake. The flourishing settlements and industries of the 4th century went into decline, as the 5th-century population of Britain adopted a lifestyle that left a much less tangible mark on the archaeological record. This decline is reflected in the 4th-century settlements that were identified at Bourn Airfield and Childerley Gate. Although they were not necessarily abandoned, little work appears to have been carried out to restructure or maintain them after the middle of the 4th century, with the ditches becoming infilled and the landscape reverting to a more open, less enclosed form. Despite this, there is some tentative evidence for continued occupation at Childerley Gate into the 5th century.

##### **4.4.1. L24: formation of dark earth at Childerley Gate (Site 5)**

(Fig. 4.13)

Although no apparent attempt was made to maintain the farmstead at Childerley Gate beyond the end of the 4th century, many of its more substantial features would have survived as earthworks into the 5th century and beyond. A relatively homogenous layer of dark-coloured soil was present in the tops of some of these larger features, possibly comparable to the ‘dark earth’ seen on other sites across the country. It was most clearly defined in the hollow left by quarry pit SG45 (G7.4, Fig. 4.13) but it also occurred in the larger ditches and ponds that had been created in the 4th century (G14.2, G18.1, Fig. 4.13). The character of the subsoil, observed during the removal of overburden from the site, suggests that this deposit used to be more extensive. It is possible that it originally formed a continuous layer, covering the core area of the settlement, but was subsequently incorporated into the subsoil by ploughing, except where it survived in some of the larger earthwork features.

The Phase 5 faunal assemblage differs from those of earlier phases; sheep or goats predominate (Appendix 13.2.2). The preservation levels for this assemblage are similar to those from Phase 4, which is dominated by cattle. The proportional increase does, therefore, seem to be genuine and is in line with a general shift towards sheep across the South Midlands during the sub-Roman period (Robinson and Wilson 1982, 61).

Although there is some evidence for cattle butchery during the earlier history of the farmstead, Phase 5 deposits produced the only evidence for butchery of sheep or goats and pigs. This suggests that butchery of these animals may have been more common in the sub-Roman period. However, this apparent trend may be due to the better preservation of the Phase 5 bones, which may also account for the fact that more pigs were identified in this assemblage than in all the earlier assemblages combined.

The cattle bones are mainly from young adults, in contrast to the older adults that are prevalent in the Phase 4 assemblage. Sheep or goats are also represented mostly by young adults, although five examples of infants were also found. The only other food species identified is goose, though red deer is also represented by a single fragment of antler. Horses are particularly well represented, with an unfused scapula (aged below 1.5 years) and two tooth rows (aged about 2 and 5 years) attesting the presence of at least three relatively young horses. The presence of animals fewer than two years of age may well suggest that horses were being bred in the locality. Amphibians are also well represented: soil samples from the dark earth in the top of the quarry pit produced eighty-eight bone fragments, representing at least seven individuals.

Despite the relative homogeneity of the deposits forming during the sub-Roman period, the artefactual assemblage recovered from the top of the quarry pit differs appreciably from that recovered from the ditches and ponds. The two assemblages are therefore discussed separately.

##### *Dark earth deposit G7.4*

(Fig. 4.14)

Much of the extensive layer of dark earth in the top of the quarry pit was removed by machine in order to reveal any features that were sealed by it. Approximately 10% of the deposit was hand-excavated, producing the artefact assemblage described below.

A relatively large assemblage of pottery was recovered — 663 sherds, weighing 8.218kg (Appendix 6.5.12). It comprises a late Roman mixture of locally produced coarse wares and pottery imported from regional centres. The assemblage contains a relatively high proportion of the very late Roman domestic colour-coated fine wares and red wares that are diagnostic of the transitional period between the end of the 4th and the beginning of the 5th century.

Nene Valley colour-coat has replaced Sandy grey ware as the dominant fabric, accounting for 30% of the assemblage. The delicate beakers of the 3rd century gave way to substantial, but attractive, utilitarian wares, including a single-handled flagon, jars, bowls, and both flanged and plain straight-sided dishes. Other Nene Valley products include grey ware and white ware jars. Sandy grey ware fabrics were still commonly in use — 24% of the assemblage — albeit in a slightly reduced range of fairly plain vessels, including jars, bowls and dishes. A

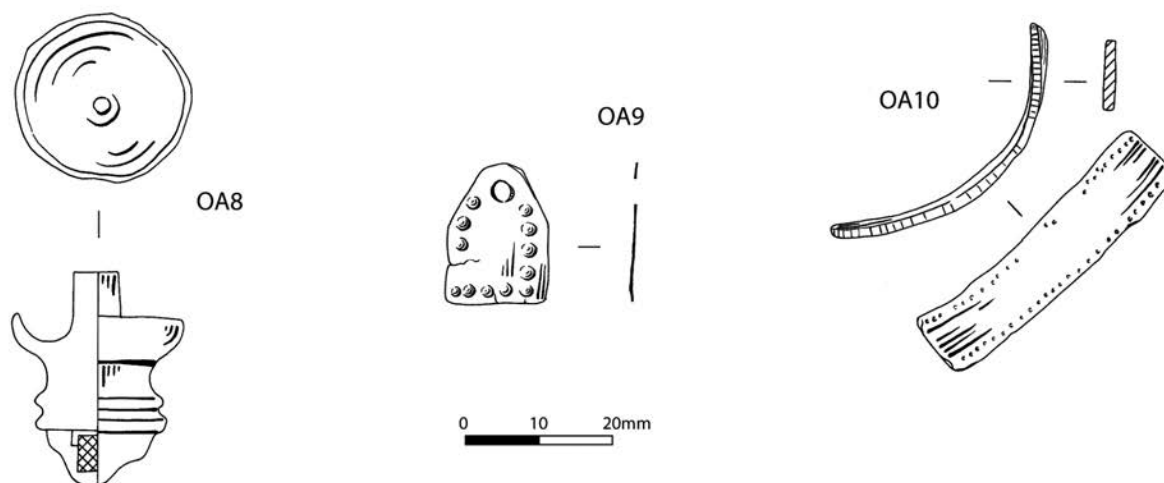


Figure 4.14 Childerley Gate (Site 5): metalwork. Cup- or bell-shaped stud (OA8), small pentagonal sheet pendant with repoussé dot ornament (OA9) and fragment of a ribbon strip bracelet with punched dot border (OA10), all from sub-Roman deposits L24

small quantity of grog-tempered grey ware could possibly be a proto-Saxon pottery type. A fairly limited repertoire of Sandy reduced wares were in use at this time: its forms include jars and straight-sided dishes.

The assemblage includes the widest representation of South Midland shell-tempered vessels. They consist of jars, dishes, and a heavily flanged bowl. Horningsea reduced and oxidised wares are both present as large storage jars, while Sandy oxidised fabrics were also still in use. Domestic red wares in the form of Hadham and Oxfordshire products were also found; the latter occur in the form of jars, funnel-necked beakers, a beaker with a cavetto rim and mortaria. The more unusual Oxfordshire white colour-coated red ware was also recorded in the form of mortarium sherds of a type known to have increased in popularity as the 4th century progressed (Young 1977, fig. 67, type C100).

This deposit also produced the majority of the Roman ceramic building material recovered from the excavations (Appendix 9.4). It includes 1.767kg of tile fragments and 2.180kg of fired clay. Lesser quantities of this material were also recovered from earlier deposits to the north and east of the quarry pit and from the pit itself, although the small quantities suggests that the structure from which the material is derived was located some distance away.

A relatively large non-ceramic assemblage was also recovered from the top of the quarry pit. Most of the eleven Roman coins are 4th-century bronze examples; the latest dates to 388–94 (Appendix 2.4.1), though the earliest is a Roman *as* dating to AD 71–79. A Colchester brooch dating to the first three-quarters of the 1st century was also found. The deposit produced a number of building fittings, with single examples of an angle tie, a staple and part of a strap from a drop hinge, as well as nine nails. An incomplete and misshapen spindle whorl and a cup- or bell-shaped stud (Fig. 4.14, OA8) were recovered (Allason-Jones 1985, 95–118, type 1). Studs have a wide range of uses, including dagger or sword pommels and terminals on furniture, and are often associated with military sites. A small pentagonal sheet pendant with repoussé dot ornament (Fig. 4.14, OA9) is similar to pendants, known as spangles, found in a 6th-century

Anglo-Saxon burial at Edix Hill, Cambs (Malim and Hines 1998, fig. 3.36, nos. 16, 22 and 28). Alternatively, however, this may have been worn on a Roman ear-ring, similar to an example from Lydney (Allason-Jones 1989, 101 and fig. 4, no. 340) (Appendix 3.3.3).

#### *Dark earth deposits G14.2 and G18.1* (Fig. 4.14)

The pottery assemblage recovered from the ditches and ponds to the north and west of the quarry pit comprises eighty-seven sherds, weighing 1.612kg (Appendix 6.5.24/29). They are mostly utilitarian coarse wares, though a relatively high number of colour-coats and red wares are also present. Moderate amounts of a variety of fabrics are present, with no single fabric dominant. Sandy grey wares, Sandy reduced wares and South Midland shell-tempered ware occur as jars and dishes. A single sherd of Dr 20 globular olive oil amphora, imported from southern Spain, was recovered. Later fine wares are well represented. The majority are Nene Valley colour-coats, found in the form of jars, a beaker and a dish. Other late Roman fabrics include Hadham red ware, found as a jar and a bowl, and Oxfordshire red ware, found as a jar and a mortarium.

The non-ceramic assemblage recovered from these deposits contains eighteen coins, including three bronze coins from the 4th century and fourteen radiates, ten of which are barbarous. Most of the barbarous radiates came from the infill of ditch SG85 near the location of the Childerley Gate coin hoard (Chapter 4.3.2), and may have been separated from it by ploughing (Appendix 2.4.1). A fragment of a ribbon strip bracelet with a punched dot border (Fig. 4.14, OA10), broadly datable to the latter half of the Roman period, was also recovered (Appendix 3.3.3).

Soil samples from these deposits produced very few charred plant items (Appendix 15). A small amount of grain and chaff fragments, some identifiable as spelt, were recovered, but the Phase 5 deposits all contained no more than background levels of crop processing debris. The molluscan assemblage did, however, produce some evidence for environmental conditions at Childerley Gate

during the 5th century. Standing water does not seem to have been a particular problem, with a relatively small number of freshwater snails *Anisus leucostoma* present. The domination of the assemblage by *Oxychilus cellarius*, *Trichia striolata* and *Vallonia pulchella* does suggest that the area around the ditches was quite damp and well vegetated (Appendix 14).

#### 4.4.2. Discussion: sub-Roman landscape

(Fig. 4.13)

When trying to identify 5th-century settlements, it is useful to consider the nature of the evidence from securely identified sites (Esmonde Cleary 2001, 93), such as Poundbury in Dorset. There, the structural remains were mostly shallow and produced only thirty-one artefacts that could be typologically dated to the 5th century. Other artefacts were present but could only be ascribed a broadly Roman date. If a substantial site can produce such ephemeral evidence for 5th-century settlement, then it is quite possible that a continuation of settlement into the 5th century on a small, plough-truncated site like Childerley Gate would leave very little trace. The collapse of pottery manufacture in Britain at the end of the Roman period meant that 4th-century pots remained in circulation long after they were made. Wooden vessels were also used more widely in the immediate post-Roman period (Stocker 2006, 52) but very rarely survive to the present-day. This combination of 'curated' pottery and the dearth of contemporary artefacts in the archaeological record make it particularly difficult to differentiate between 4th- and 5th-century settlements.

The changed circumstances facing the population of lowland Britain in the 5th century also help to account for the relative invisibility of settlement sites. The 4th century had seen a well developed social hierarchy, a substantial military presence, and an incentive to produce surpluses, not least because the export of grain to the Rhine was restarted in the 350s (Esmonde Cleary 1995, 20). Land that had previously been used for pasture was brought under cultivation and more money became available for spending on manufactured goods. Once the Roman army and the state bureaucracy had left, however, there was no need to produce a surplus and there were, in any case, fewer manufactured goods to buy. The social hierarchy became less structured, with fewer of the high status buildings that are easily visible in the archaeological record. It is also generally accepted that there was a significant decline in population (Stocker 2006, 52). Many of the arable fields that had been created in the 4th century reverted to pasture. In essence, people were able to survive largely by retaining the infrastructure that had been established during the Roman period.

Only Childerley Gate has produced evidence for 5th-century activity of any kind along the northern edge of the Bourn Valley. At first sight, it appears that the late Roman settlement at Childerley Gate was simply abandoned at the end of the 4th century, with the earthworks ploughed flat from the early medieval period onwards. However, a closer examination can perhaps

allow a slightly more positive interpretation of the surviving remains.

The deposits from the top of the 4th-century ditches and ponds do seem to be characteristic of material that has been re-deposited by ploughing (G14.2 and G18.1, Fig. 4.13). They did not produce a particularly large artefactual assemblage, and the soil horizon between them and the earlier infill of these features suggests that they formed more gradually than the deposits in the top of the quarry pit. Similar dark earths have been identified at numerous settlements, including nearby Vicar's Farm and New Hall on the western edge of Cambridge (Evans and Lucas forthcoming). They are commonly interpreted as soils with a high organic content which have been deliberately re-used to improve arable land; this interpretation appears to apply to both New Hall and to these two deposits at Childerley Gate.

In contrast, the material from the top of the quarry pit contained a large and varied artefact assemblage (G7.4, Fig. 4.13). The animal bone is also better preserved than that from the earlier deposits at Childerley Gate, which is not characteristic of an assemblage that has been redistributed by ploughing. At Vicar's Farm, a layer of dark earth was spread at the core of the still-occupied settlement; it may have been hearth debris that was repeatedly scattered over the area in order to make it drier and less waterlogged for people using it as a surface on which to live (Evans and Lucas forthcoming). If deposit G7.4 is viewed in a similar light, then 5th-century occupation at Childerley Gate can be posited with more confidence. The hollow in the top of the quarry pit was certainly damp, as shown by the amphibian bones recovered from it, and the layer that formed in it did contain a large amount of occupation debris.

The artefactual evidence from deposit G7.4 does not conclusively demonstrate continued activity into the 5th century but, for the reasons stated above, it should not necessarily be expected to do so. However, the recovery of coins from as late as 388–394 and the higher proportion of the very late Roman domestic colour-coated fine wares and red wares — diagnostic of the transition to the sub-Roman period — do suggest occupation in some form beyond the end of the 4th century. This possibility is also supported by the predominance of sheep or goats within the faunal assemblage, which is a characteristic of sub-Roman or early medieval assemblages (Robinson and Wilson 1982, 61).

The possibility that people — not necessarily descendants of the 4th-century farmstead's inhabitants — continued to live at Childerley Gate in the sub-Roman period must, at least, be considered. There is no reason to suppose that the 4th-century buildings and enclosures would not have survived for at least a time. No evidence for late Saxon or Saxo-Norman settlement was identified on any of the sites within the road scheme but, by that time, the ridge was again marginal land and would only be cultivated once more when population levels peaked in the medieval period (Chapter 5.2).

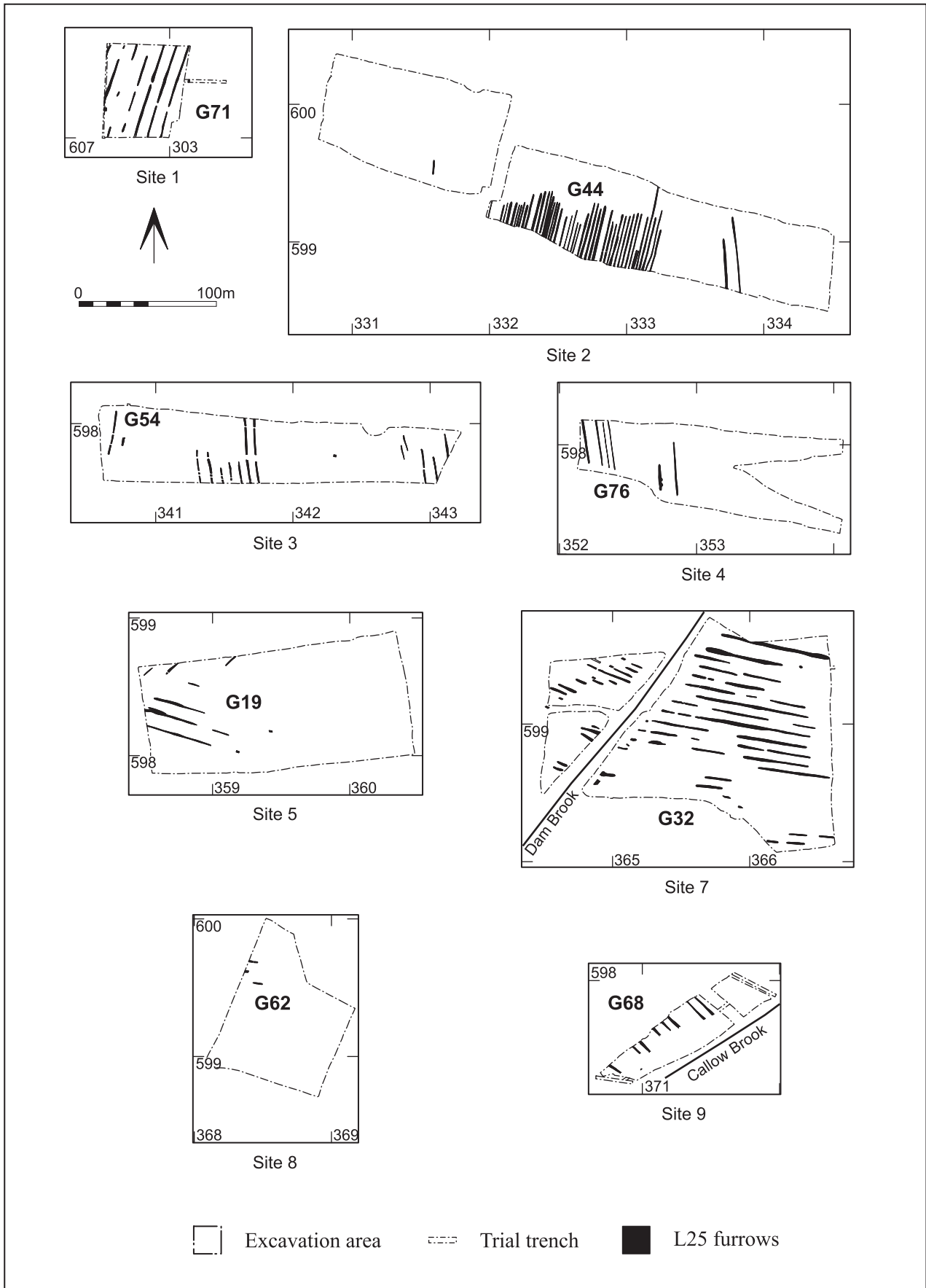


Figure 5.1 Remnant medieval furrows (all sites)

# 5. The Medieval and Post-Medieval Landscape (12th–19th Centuries AD)

## 5.1. Introduction

Although the Bourn Valley is located within East Anglia, western Cambridgeshire actually has much in common with the Midlands region, which in some respects is very different to East Anglia. Characterisation of the landscape of the Bourn Valley during the medieval and post-medieval periods must take this into account. Within England, the East Midlands saw the most developed form of the ‘planned’ medieval agricultural landscape (Williamson 2003, 62). Its settlement pattern was characterised by nucleated villages, practising the classic two- or three-field form of cultivation. The medieval landscape of this region is ‘sometimes called “champion”’: a landscape of wide fields and few woods or enclosures, in which medieval arable lay in two or three very large fields’ (Oosthuizen 2006, 13). The physical remnants of these large, open fields comprise the characteristic ridge and furrow earthworks that were once so common in the region, but which were mostly flattened by ploughing in the 20th century. Williamson further argues that, although this part of Cambridgeshire is indeed within the region traditionally described as ‘champion’, it is better described as ‘south-eastern champion’ in recognition of its distinctive geological and soil characteristics (Williamson 2003, 72).

The boulder clay ridge on the north side of the Bourn Valley has traditionally been viewed as marginal land. However, the series of excavations along it revealed widespread ridge and furrow field systems. Williamson comments that ‘in the course of the 10th, 11th and 12th centuries, cultivation expanded on the heavy soils of the interfluves ... existing settlements grew and coalesced to form irregular nucleations while the new settlements, spreading out across the clay plateau, took the form of small hamlets ... or sometimes consisted of isolated farms’ (Williamson 2006, 52). The significance of the furrows revealed within the excavated sites is considered below, in the context of the medieval expansion of arable cultivation onto the clay soils (Chapter 5.2.3).

In contrast to the Midlands, the medieval open fields of western Cambridgeshire often incorporated pre-medieval field systems and landscape boundaries, generating continuity in the landscape (Williamson 2003, 74). These landscape boundaries were largely retained in the post-medieval period, although the increasingly common practice of land enclosure had a profound effect on the character of the landscape. For example, it allowed the construction of a large moated garden feature at Childerley Chapel on what was previously common land (Chapter 5.3.2). The impact of enclosure is considered below (Chapter 5.3.5), including its effect on the character of the routeway which ran along the northern ridge of the Bourn Valley and which became increasingly important as a communication route with the passage of time.

## 5.2. Medieval agricultural landscape (12th–13th centuries: Phase 6)

### 5.2.1. L25: medieval field systems

(Fig. 5.1)

The remains of medieval field systems were encountered within all of the excavated sites except Site 10 at Camford Way (Fig. 5.1). They comprised the shallow remnants of furrows, which had been cut through the subsoil into the underlying boulder clay. The furrows were mostly spaced 7–10m apart, although their spacing at Ash Plantation (Site 2) was as little as 3m apart, suggesting that not all of them were contemporary.

Based on slight variations in alignment, the furrows identified within these eight sites can be split into five blocks (Fig. 5.1). Their alignment was similar from Caxton Gibbet (Site 1) to the western end of Bourn Airfield (Site 3), and then, with a slight overlap, from the central part of Ash Plantation (Site 2) to Childerley Chapel (Site 4). A largely uniform alignment was then apparent from Childerley Gate (Site 5) to Scotland Farm (Site 8), before it changed slightly at Hardwick (Site 9). The site at Childerley Gate also contained two furrows and a ditch that differed from the predominant alignment at that point.

### 5.2.2. L31: medieval routeway

(Fig. 1.14)

Two pairs of shallow wheel ruts (L31) were revealed on Site 10 at Camford Way (Fig. 1.14). The ruts in each pair were spaced *c.* 1.3m apart, consistent with the gauge of a medium-sized cart. Their date is uncertain: they were stratigraphically later than early Roman field system G78, but no artefactual evidence was recovered to assign them a more precise date. However, circumstantial evidence for their date is discussed below.

### 5.2.3. Discussion: medieval field systems and routeway

(Figs 5.1–5.2)

The presence of plough-truncated furrows may be anticipated on most archaeological excavations in Cambridgeshire. Few survive as earthworks, largely because of modern ploughing. As data held by the Cambridgeshire Historic Environment Record show, ridge and furrow field systems were common in the county during the medieval period. The significance of the physical remains from these excavations, and from others such as Caldecote Highfields (Kenney 2007) and Cambourne (Wessex Archaeology 2003), is amplified by the long-standing study of the landscape history of this area (Taylor 1973; Rackham 1986; Williamson 2003; Oosthuizen 2006).

Oosthuizen’s extensive landscape study of the Bourn Valley has combined the analysis of local field names, archaeological data and pre-enclosure maps, resulting in a detailed understanding of the agricultural economy of the

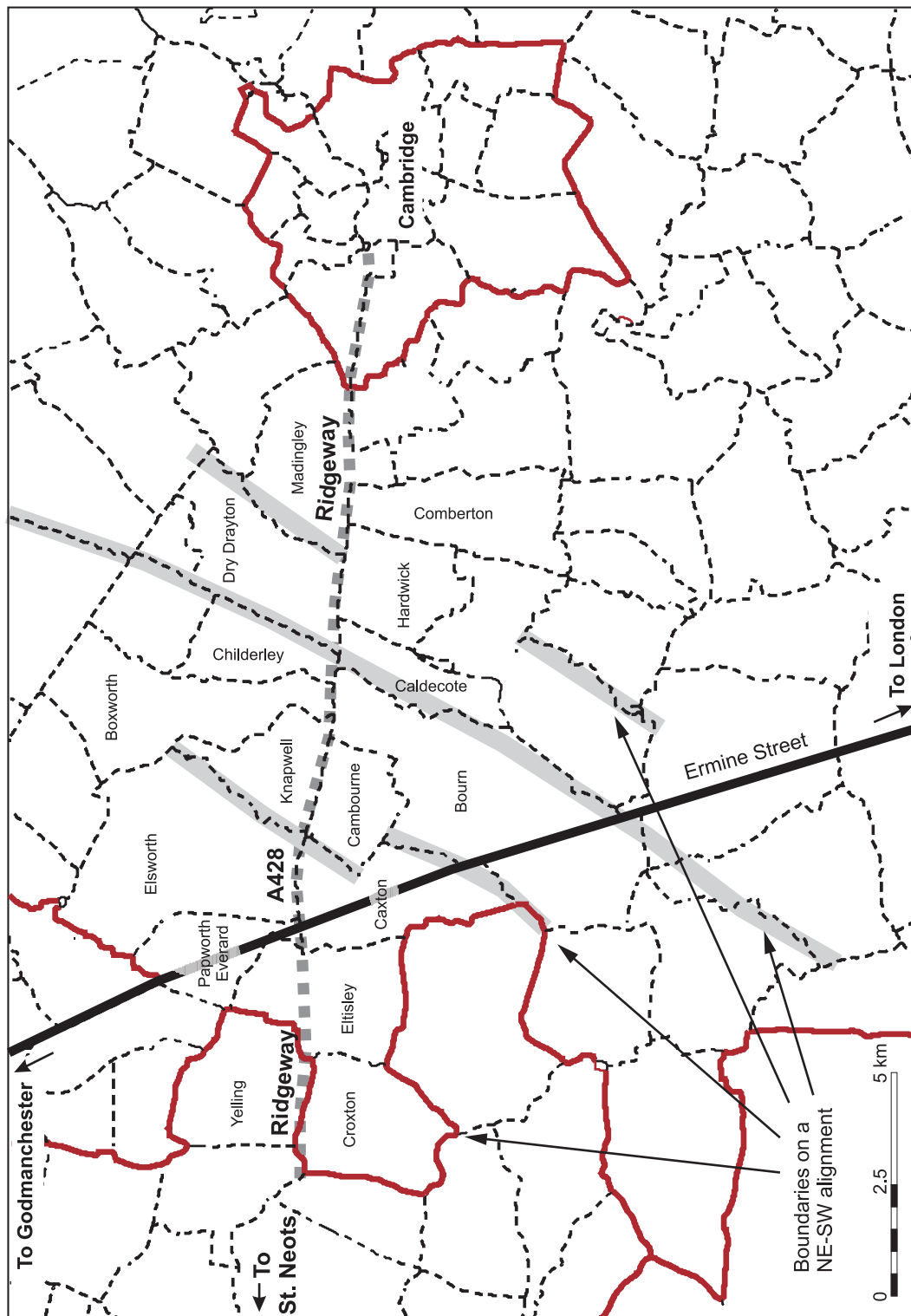


Figure 5.2 Parish boundaries along the northern side of the Bourn Valley

area during the late Saxon and medieval periods. Her work has revealed that pastoralism was predominant on the higher ground, while arable agriculture was practised on the lower ground, close to the Bourn Brook and the Bourn Valley spring line (Oosthuizen 2006, 60).

The evidence from the excavations initially appears to contradict this pattern, revealing widespread remains of medieval arable fields along the northern edge of the Bourn Valley. The explanation behind this lies in population levels. For example, it is estimated that 24% of the land in Hardwick parish was under arable cultivation in 1086 (Oosthuizen 2006, 44); this percentage reflects Hardwick's location on the upper half of the northern ridge, above the area of prime arable land in the base of the valley (Fig. 5.2). However, this percentage had increased to 54% by 1251, a change which can be ascribed to growth in the local population, and the subsequent need to increase food production. The 12th and 13th centuries are identified as a high watermark for population levels in the medieval period.

The increased demand for arable land meant that crops were grown on land which had previously not been considered for arable use. One example of this can be seen at Scotland Farm (Site 7), where the medieval fields were extended right up to the edge of the Dam Brook (Fig. 5.1). Not only would the heavy clay have been difficult to cultivate in such a location, but the crops may also have been susceptible to ruin as a result of flooding. Ceramic land-drains were laid along a number of the furrows in the 19th century, indicating that they were still visible as earthworks at that time, whilst anecdotal evidence gathered during the excavation from the owner of Scotland Farm suggests that the ridge and furrow earthworks were still present in the mid 20th century. The survival of these earthworks from the end of the medieval period suggests that, as grazing and wool production became a more important part of the rural economy, the unattractiveness of this land for arable use meant that it was not ploughed again until the recent past, with the advent of modern farming techniques.

Local field and place names provide further evidence for the unsuitability of the land along the northern ridge of the Bourn Valley for arable cultivation. *Hungry Hardwick* dates to the 19th century (Pugh 1967, 99) and is an evocative name for the parish, suggesting that crop failure was not uncommon even then. The name *Starvegoose Close* was also given in the 19th century to three separate land parcels in the parishes of Great Eversden, Comberton and Hardwick; it is suggested that the name indicates that these fields could not produce enough food to sustain even a goose (Oosthuizen 2006, 43). Similar field names elsewhere in England have been connected with the hunger of the land, rather than of people; for example, *Hunger Hill* in Harpole, Northamptonshire is described as being 'hungry and needing much manure' (Field 1993, 82).

The furrows identified within the excavations are thus evidence for a relatively brief period when the land along the ridge was cultivated. Rather than contradicting Oosthuizen's model of the agricultural landscape of the Bourn Valley, their presence serves to emphasise the heightened demand for arable land in the 12th and 13th centuries.

Within this context, the absence of furrows at Camford Way (Site 10) stands out. Although this may simply be due

to modern plough truncation, an alternative explanation is that this strip of land remained in use as a communication route throughout the medieval period. Before the 12th century, when there was less pressure on land for arable cultivation, this route is likely to have been very wide, as it was once again in the early post-medieval period (Chapter 5.3.1). However, the increased demand for arable land would have meant that the fields encroached on this area, as they did (for different reasons) following the Act of Enclosure in 1801 (Chapter 5.3.5). This may explain the presence of wheel ruts L31 at Camford Way, and their absence at Bourn Airfield (Site 3). Traffic would not have been able to traverse a wide route that incorporated land for grazing animals, but would have been confined to a narrower track, with each successive cart making the ruts deeper. It seems likely that the medieval route along the ridgeway followed approximately the same constrained course as the modern road did in the 19th and 20th centuries, only expanding again once the demand for arable land had subsided.

### 5.3. Post-medieval influences on the modern landscape (14th century onwards: Phase 7)

#### 5.3.1. L26: green-way at Bourn Airfield (Site 3) (Figs 3.3, 5.3–5.4)

A large, east-west aligned ditch G58 was revealed at Bourn Airfield (Site 3); it was up to 2.8m wide and 0.9m deep (Figs 5.3 and 5.4). It meandered across the entire length of the excavation within a 10m-wide strip of land, and may have been part of the same feature as the one identified by cartographic analysis to the south of the modern A428 at Caxton Gibbet (Fig. 3.3). The ditch appears to have silted up naturally, rather than being deliberately levelled. However, the latter cannot be completely discounted, as only the lower portion of Site 3 features survived the truncation caused by ploughing and the construction of the airfield.

Recovered artefacts include four Roman coins (Appendix 2.4.2) and a copper alloy hairpin (Appendix 3.3.2; Fig. 4.4, OA8) from a segment (Fig. 5.3, b) excavated near late Roman settlement G50, from which they are thought to derive. The coins may originally have formed part of the Bourn Airfield coin hoard (Appendix 2.3), which was found immediately to the south (Fig. 5.3, SG218.1). Despite the presence of Roman artefacts, the ditch is unlikely to have been constructed before the 14th century, since it cut through a series of furrows which are thought to date to the 12th–13th centuries (Chapter 5.2). There is no artefactual dating evidence for the demise of the ditch. However, the fact that it was cut by 19th-century enclosure ditches (Chapter 5.3.3), by which time it had already been superseded by roadside ditch G55 (Chapter 5.3.3), suggests that it had gone out of use by the end of the 17th century.

#### 5.3.2. L27–27.1: moated garden feature at Childerley Chapel (Site 4) (Figs 5.5–5.6)

The remains of a large, rectangular moated garden feature G77 were excavated immediately to the west of Childerley Chapel (Fig. 5.5). Its location was already known from aerial photographs and historical maps (Fig. 5.6); indeed, beyond the excavated area, the eastern side of the moat still survives as an earthwork. However, excavation

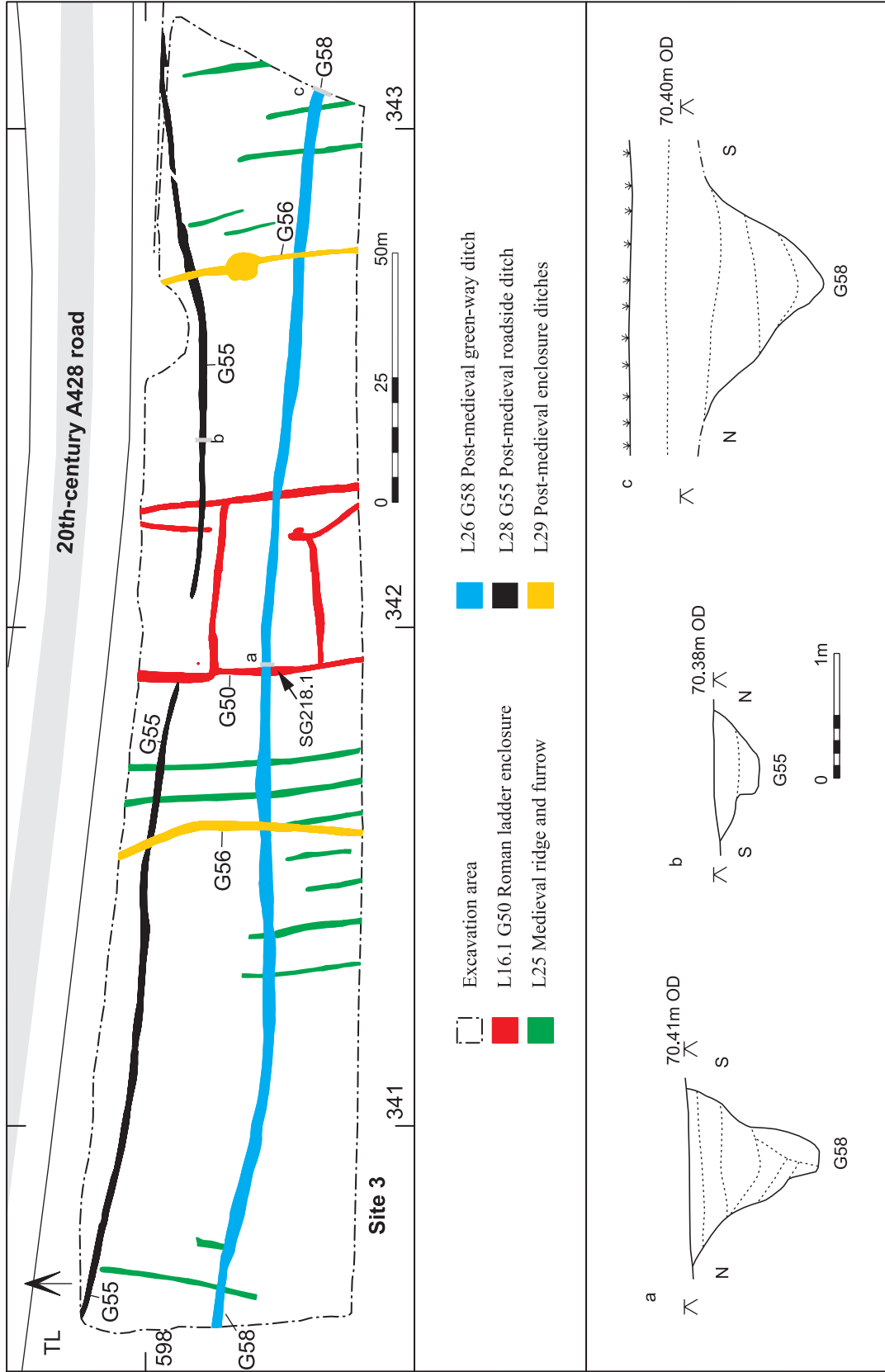


Figure 5.3 Bourn Airfield (Site 3): medieval and post-medieval remains, cutting the late Roman settlement G50



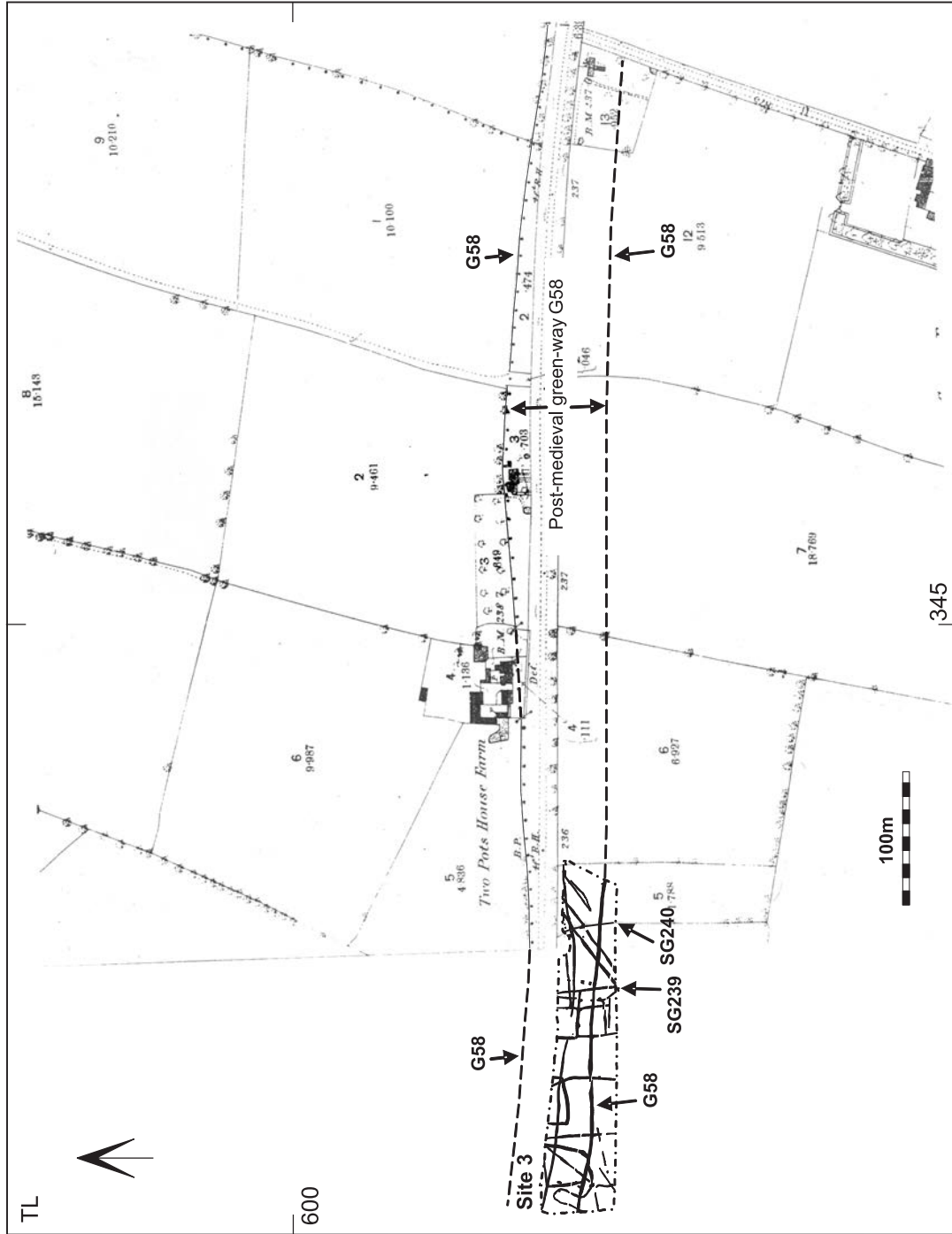


Figure 5.4 Putative route of post-medieval green-way G58 overlain on 1886 1st edition Ordnance Survey map (XXXIX.14).

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revealed that, rather than being a medieval moat as was previously believed (Chapter 5.3.5), it was in fact constructed in the post-medieval period. Pottery dating to the 17th–20th centuries was present throughout its infill (Appendix 7.1), suggesting a possible 16th–18th-century date for its creation. Further evidence for the date and function of this feature is discussed below (Chapter 5.3.5).

The ditches of the moat were up to 8m wide and 1.5m deep (Fig. 5.5, b), enclosing a 135m-long and 40m-wide area. The southern ditch was significantly smaller than the others, reflecting the fact that it was primarily a roadside ditch bounding the early post-medieval St Neots to Cambridge road. The morphology of the moat suggests that this roadside ditch was already in place when the moat was constructed. In the centre of the northern side of the moat was an 18m-wide opening, externally defined by a small gully SG278 of uncertain function. It may have formed part of an ornate entrance to the moat: its infill contained part of a circular-sectioned iron rod and a cast iron perforated plate, possibly from a large strap hinge, both of which are consistent with the presence of an entrance gate or door. The infill of the moat also produced a number of nails, including a possible door stud (Appendix 3.4), which are consistent with the presence of a post-medieval timber structure, perhaps a fence or a wooden seating area, within the area enclosed by the moat.

### **5.3.3. L28: post-medieval brook-side boundaries, drove-way, roadside ditches and quarry pit** (Figs 5.3, 5.7)

The remains assigned to L28 principally comprise a series of boundary features (Fig. 5.7). Artefactual dating evidence is limited but, combined with circumstantial evidence, suggests they were created in the 18th or 19th centuries, with some continuing in use into the 20th century.

On Site 7 at Scotland Farm, two boundary ditches G33 ran roughly parallel to, and *c.* 40m from, each side of the Dam Brook. Two further ditches G34 formed a 4m-wide trackway between the eastern ditch and the brook. The ditches and the trackway are believed to have been broadly contemporary. Although they were on slightly different alignments, the trackway may simply have been diverted around a particularly marshy area. Modern artefacts from the infill of the western boundary ditch, combined with anecdotal evidence from the owner of Scotland Farm, suggest that they were all still in use in the 20th century. The presence of a contemporary ceramic land-drain in the base of the eastern boundary ditch suggests a construction date in the 19th century. Similarly, ditches G67 on Site 9 at Hardwick formed either a boundary or a drove-way, *c.* 20m from the north-western side of the Callow Brook.

Two roadside ditches were also identified: G63 on Site 8 at Scotland Farm (Fig. 5.7) and G55 on Site 3 at Bourn Airfield (Fig. 5.3). Both lay *c.* 10–15m from modern roads. The spatial relationships between the ditches and the roads are important, as they give an indication of the ditches' date. Prior to the 19th century, rural roads were wide, and often badly defined (Hindle 2002, 6), like, for example, the green-way at Bourn Airfield (Chapter 5.3.1). In contrast, ditches such as G55 and G63, which lie close to modern roads, are almost certainly associated with land enclosure, which was at its height in this area during the 18th and 19th centuries (Chapter 5.3.5). Their purpose was to define the road's maximum extent, and to

discourage travellers from straying onto the neighbouring enclosed fields. The date of the roadside ditch at Bourn Airfield can be further refined, as it was cut by two later ditches G56, one of which had already been infilled by 1842 (Chapter 5.3.4). This suggests that the ditch at Bourn Airfield may have had a short-lived existence at the beginning of the 19th century, before it was replaced by another ditch that was even closer to the road.

In addition to these ditches, it is worth mentioning that a relatively large quarry pit G64 was partially revealed on Site 8 at Scotland Farm (Fig. 5.7). It contained fragments of ceramic land-drain, suggesting a 19th-century date. The pit was dug into the same geological outcrop of marl which had been targeted by the Iron Age pits on the same site (Chapter 2.2.5). Marl was also quarried on a larger scale at Childerley Gate (Site 5) in the Roman period (Chapter 3.6.1), hinting at a long-standing appreciation of the value of this material in improving the quality of the soil along the ridge.

### **5.3.4. L29: post-medieval field boundaries and the 19th-century St Neots to Cambridge road** (Figs 5.8–5.9)

Four post-medieval field boundary ditches were identified at Ash Plantation (Site 2), Bourn Airfield (Site 3) and Childerley Gate (Site 5); their dates are uncertain, but they are all likely to have been constructed in the 18th or 19th centuries. Remains of the 19th-century St Neots to Cambridge road were also revealed at Camford Way (Site 10).

The suggested date for ditch G45 at Ash Plantation is based largely on its parallel alignment with a ditch that was extant at the time of excavation, splitting the excavated area into two parts (Fig. 5.8). Ditch G45 does not appear on the 1842 Tithe Map, however, nor on any subsequent maps. The westernmost of the two ditches G56 at Bourn Airfield is similarly absent from the Tithe Map, and may also have been filled in to create a larger field (Fig. 5.8). In contrast, ditch G20 at Childerley Gate is still shown on the 1886 25-inch OS map (Fig. 5.9). The presence of an apparently contemporary ceramic land-drain in the base of the ditch suggests that it was constructed during the 19th century.

Evidence for the 19th-century St Neots to Cambridge road was revealed in the form of a *c.* 3m wide linear deposit of compacted orange gravel G81 at Camford Way, directly beneath the 20th-century A428. Figure 5.10 shows the close correlation between this band of gravel and the road on the 1886 25-inch OS map.

### **5.3.5. Discussion: post-medieval roads and enclosure of the surrounding land** (Figs 5.3–5.4, 5.6–5.8, 5.10–5.11)

The modern A428 runs along the line of a prehistoric ridgeway; this route has been used for the passage of humans and animals since at least the Iron Age (Chapter 3.1.1). It is interesting to trace its development through time, looking at how the changing demands on the route and on the surrounding land have altered the character of both.

Throughout much of its existence, the route along the ridgeway effectively constituted a very wide drove-way, passing through a predominantly pastoral landscape (Chapter 5.2.3). The route only changed in nature when the character of the surrounding land changed. An

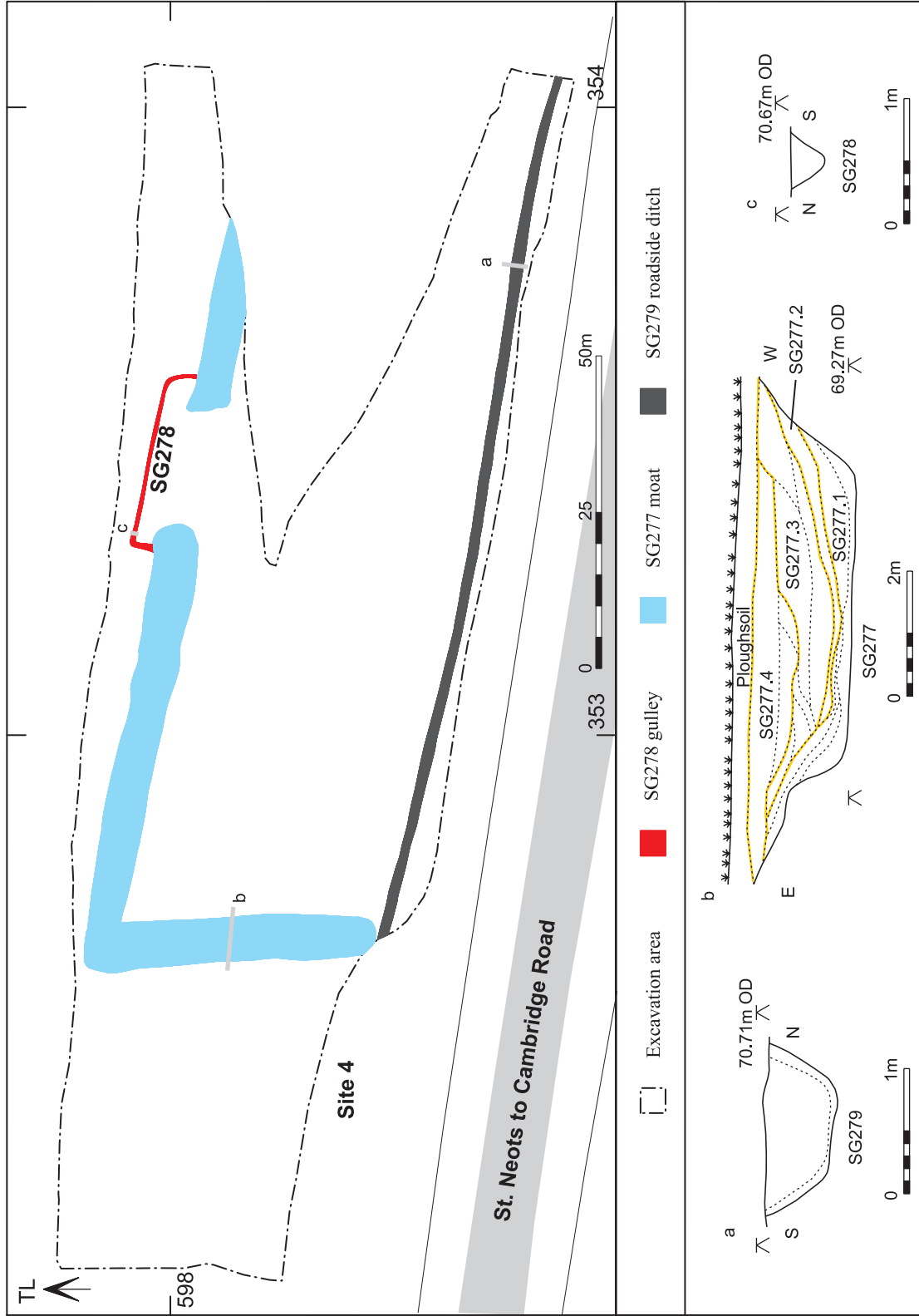


Figure 5.5 Childerley Chapel (Site 4): moated garden feature G77

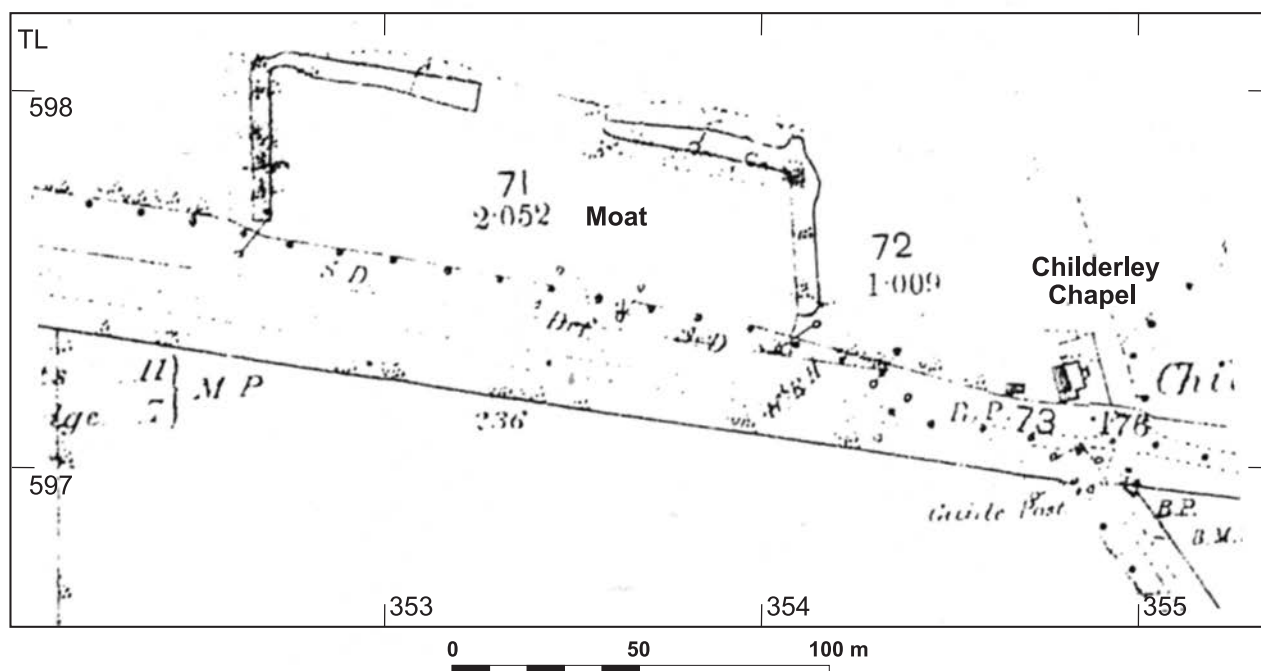


Figure 5.6 Childerley Chapel (Site 4): crop-mark of moated garden feature G77 visible on aerial photograph (1969 Meridian Series), and 1886 1st edition OS (XXXIX.14) showing moat.

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increased demand for arable land in the 12th and 13th centuries meant that it became much narrower (Chapter 5.2), before expanding again as green-way G58 when the land reverted to pasture. However, the route gradually narrowed throughout the post-medieval period (roadside ditch G55) as enclosure for economic gain reduced the amount of land that was available for use as a road. Ultimately, the 19th-century St Neots to Cambridge road was similar in width to the 20th-century A428 (Fig. 5.10).

When the width of the route expanded in the early post-medieval period, its southern edge was defined by green-way ditch G58. At Bourn Airfield, this ditch lay 40m–50m south of the 20th-century A428 (Fig. 5.3). No matching ditch of similar morphology was found within the excavated area, suggesting that the northern side of the green-way lay beneath, or even beyond, the modern road. The 1886 first edition OS map (Fig. 5.4) shows a narrow strip of land on the northern side of the St Neots to Cambridge road, to the east of Two Pots House Farm. It is suggested that the northern edge of this strip preserved the line of the northern side of the green-way, making it approximately 80m wide. Unmade tracks of this width were relatively common in the medieval and early post-medieval periods; very few communication routes were engineered or maintained, and most are better described as ‘ways’ rather than as roads. Their exact route and actual limits were often poorly defined, and some were less a physical entity than a right of way, which local

people understood, and which was sometimes given a legal status.

The condition of the ground within these unmade tracks was frequently poor, through a combination of bad weather and the passage of horses and carts; their width was partly due to the need to divert carts around areas that had become impassable. Notably, the 1285 Statute of Winchester gave travellers the legal right during wet weather to diverge from a known route, even if that entailed trampling crops lying to the side of their path (Hindle 2002, 6). Further evidence for the state of medieval roads comes from a letter written in 1285 on behalf of Edward I, referring to the condition of the main street in Dunstable, Bedfordshire: ‘we have learnt that the high roads, which stretch through the middle of your vill aforesaid, are so broken up and deep by the frequent passage of carts, that dangerous injuries continuously threaten those passing by those roads: we wishing to be guarded against such injuries ... command you that you, that is to say, each one of you according to his estate ... shall cause those roads to be filled in and mended’ (Hindle 2002, 20). If the main road through a town had become so injurious to the health of travellers, it is easy to imagine how much worse the condition of a rural green-way might have become.

The fact that green-way G58 was defined at all suggests that landowners on either side wanted to limit the route’s lateral expansion. A large amount of manpower

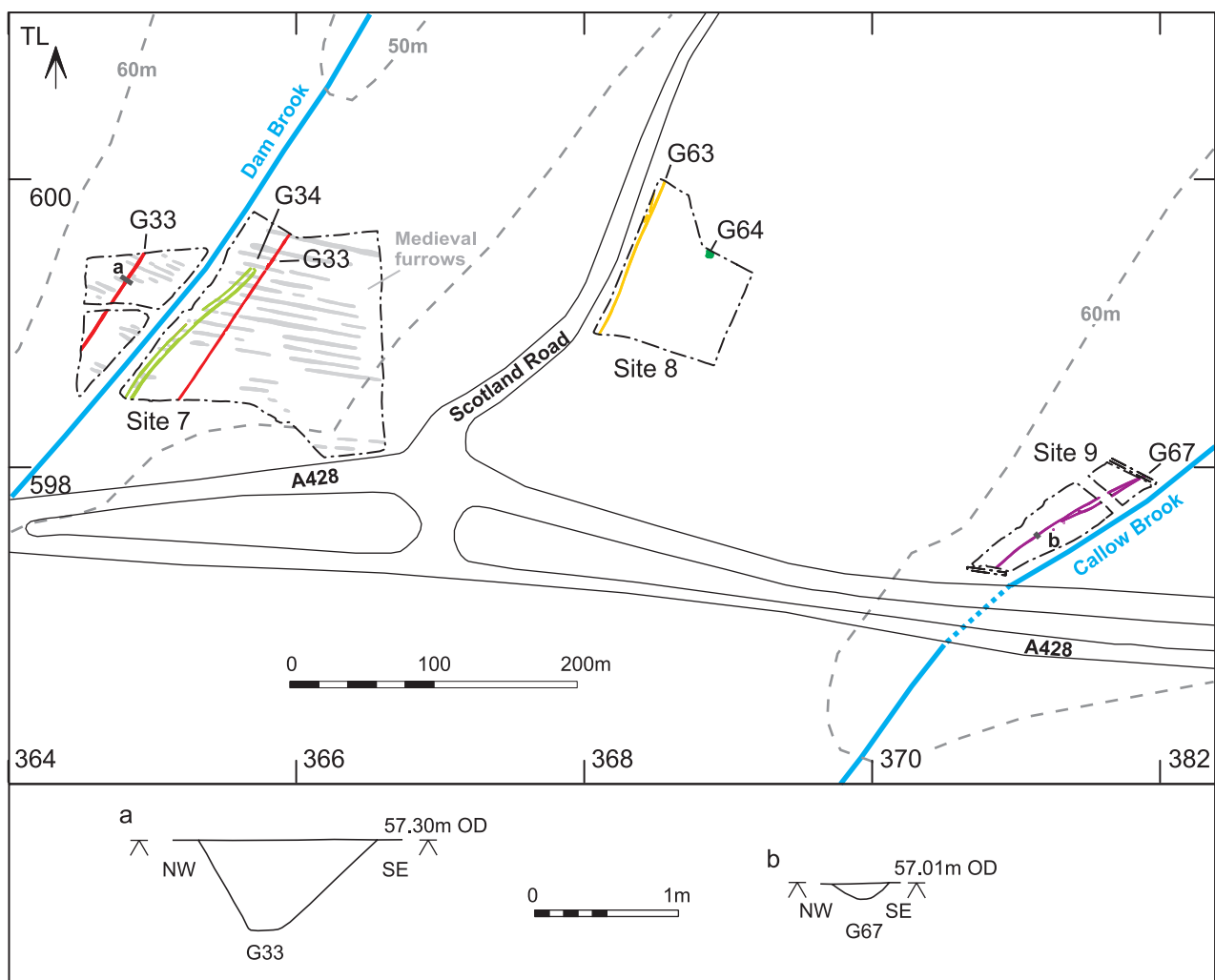
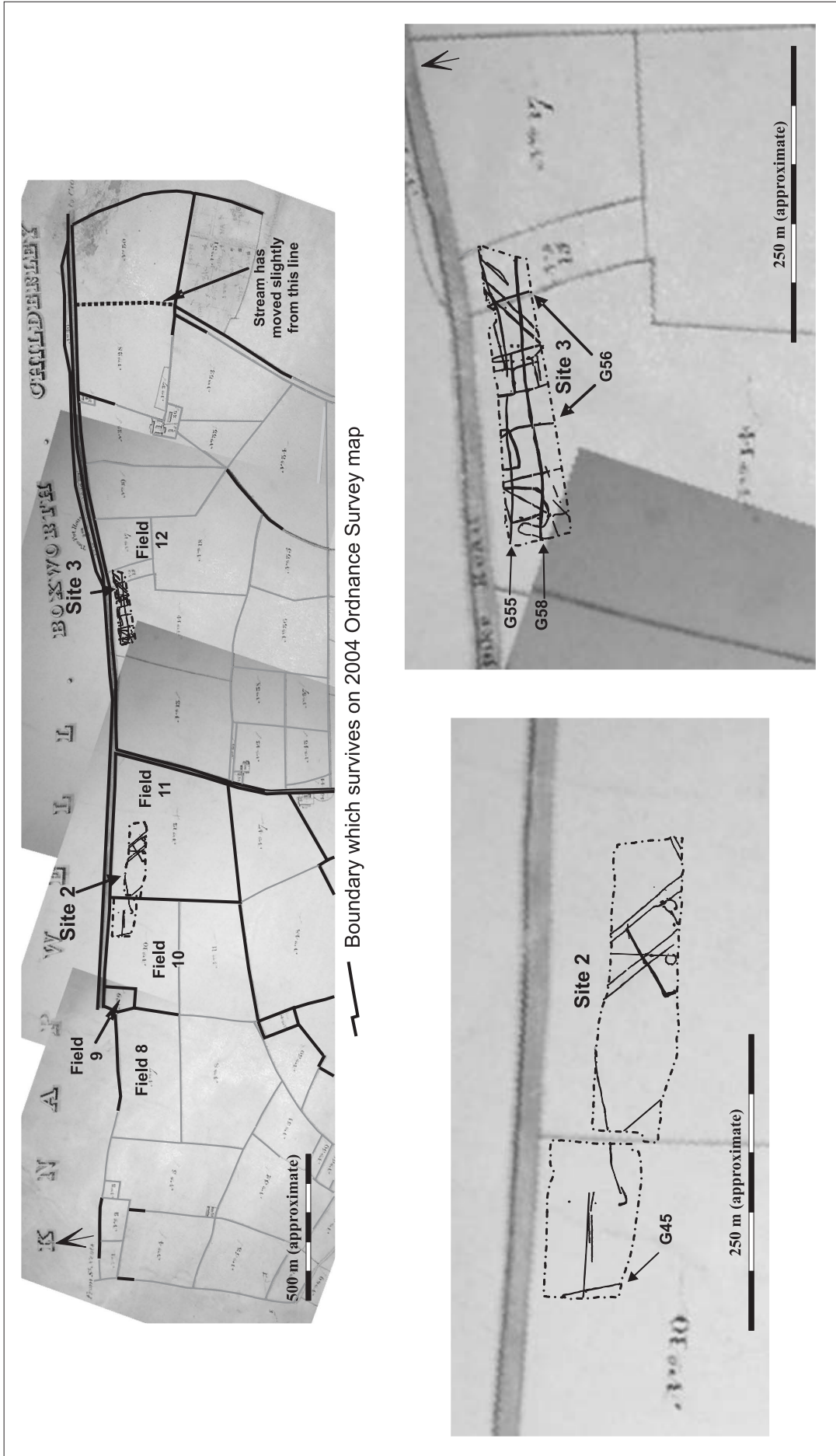


Figure 5.7 Scotland Farm (Sites 7 and 8) and Hardwick (Site 9): post-medieval brook-side and roadside ditches



Boundary which survives on 2004 Ordnance Survey map

Figure 5.8 Ash Plantation (Site 2) and Bourn Airfield (Site 3) overlying the Bourn Tithe Map (1842) (P14/27/1-2)

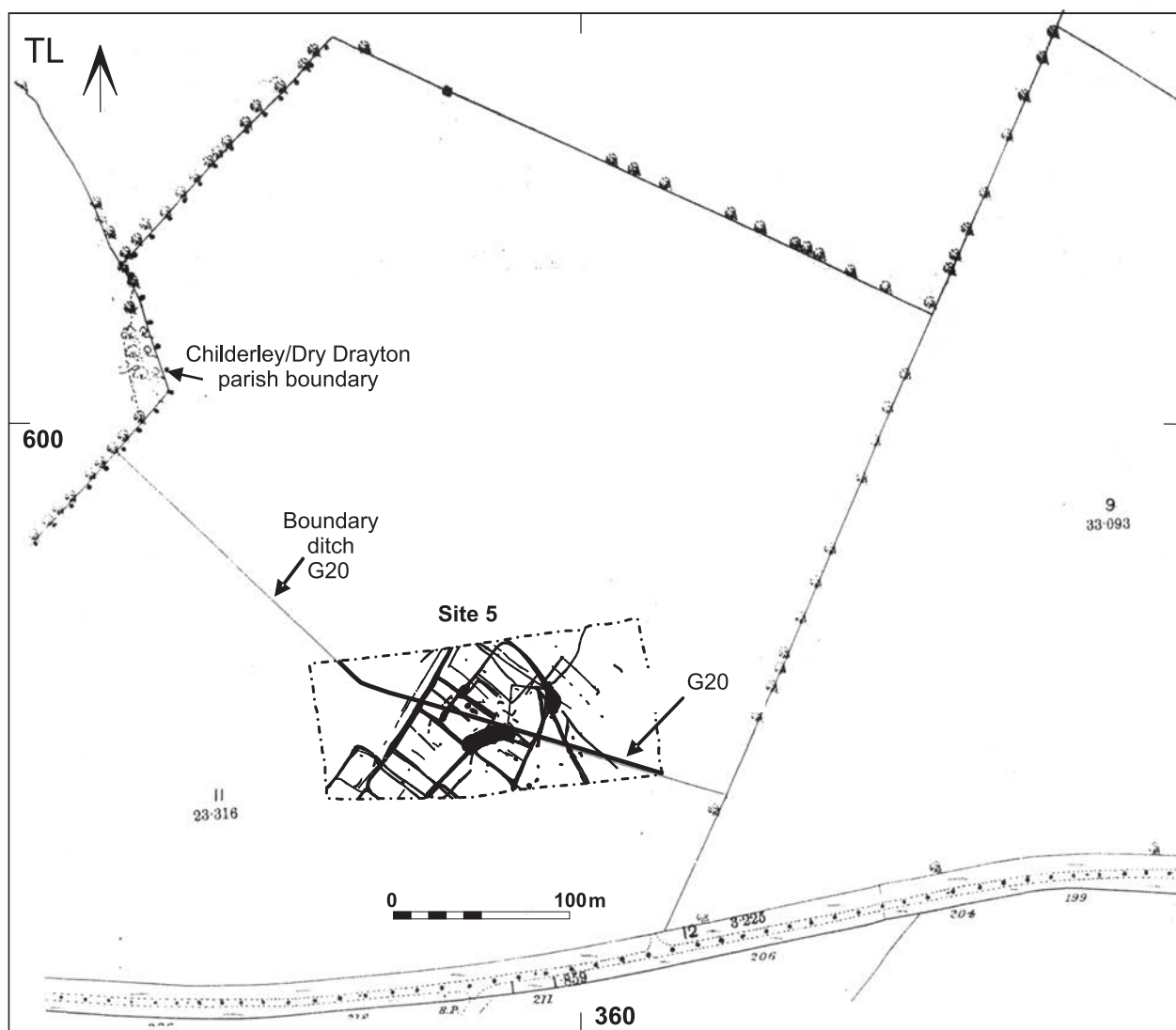


Figure 5.9 Childerley Gate (Site 5): all features plan overlaid on 1886 1st edition Ordnance Survey map (XXXIX.14), showing the historical field boundary formed by ditch G20.

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would have been required to dig large ditches, several miles in length, necessitating a significant amount of both organisation and expenditure. The economic interest in the surrounding land placed an increasing amount of pressure on the width of the route throughout the post-medieval period, and a narrower route was subsequently defined by ditch G55 at Bourn Airfield. This narrowing of the route culminated in the creation of the 19th-century St Neots to Cambridge Road, which was approximately the same width as the modern single carriageway road (Fig. 5.10). The reduced width that was available to traffic meant that the 19th-century road required a more robust surface, which provided a further incentive to make the road narrow, in order to minimise the cost of materials and labour. The recent construction of the new dual carriageway, making the route roughly the same width as it was before the 1801 Parliamentary Act of Enclosure, is simply the latest event in the alternate expansion and contraction of this route.

Although enclosure reached its peak following the 1801 Act, land along the northern ridge of the Bourn Valley began to be enclosed into privately-owned fields from as early as the 12th century. This process increased sharply in the 15th and 16th centuries as sheep farming became more profitable. Even though the open fields had often been in private ownership, local people had had a variety of common access rights over the land; their conversion into enclosed fields had a huge effect on the local population, with the loss of valuable resources such as firewood, food and grazing land. Few things have affected the British countryside as radically as the 1801 Parliamentary Act of Enclosure, which revolutionised the agricultural economy and caused social unrest. It ultimately contributed to major changes in the labour market, and prompted major shifts in population from the countryside to the fast-growing towns.

Critics of this practice included Thomas More, who commented in his *Utopia* (1516) that sheep farming was literally eating both the commons and the communities

which depended on them. However, the process continued until Parliament passed a series of laws in the late 18th century which addressed enclosure within individual regions of the country, culminating in the agreement of a common framework in the 1801 Act. This date is important for our understanding of the changes that took place in the late post-medieval landscape of this area, as Cambridgeshire is a county within which 50% of land was enclosed in the century following the Act (Turner 1986, 2). It is likely, given their date, that ditches G20 at Childerley Gate (Site 5), G45 at Ash Plantation (Site 2) and G56 at Bourn Airfield (Fig. 5.8) were connected with the Act. Ditches G33 at Scotland Farm (Fig. 5.7) are also likely to have been part of the process of enclosing land, with a significant secondary function as drainage ditches. The gap between the ditches and the Dam Brook may have been left unenclosed as a public right of way, before subsequently being incorporated into the enclosed fields of Scotland Farm. The broad continuity of boundary alignments in the area to the west of Cambridge (Chapter 6.2) tends to mask some of the significant changes that took place in the landscape as it became enclosed; yet this process extinguished medieval commoners' rights of access to substantial tracts of the countryside, bringing a whole way of life to an end.

At the same time as the route along the ridgeway was being narrowed as a result of enclosure, the moated garden feature at Childerley Chapel (Site 4) was constructed. Although excavation of the moat proved it to be post-medieval in date, it was previously assumed to have been medieval (Cambridgeshire Historic Environment Record, SMR01099; Williamson 2003, 77). More than 300 medieval moated sites are known in Cambridgeshire, and such sites are particularly common in the south-west of the county (Rackham 1986, 361), perhaps because of the water-retentive qualities of the underlying boulder clay which characterises the area. However, the land along the northern edge of the Bourn Valley is thought to have been common land during the medieval period (Williamson 2003, 75), making the construction of a private moated garden in this location very unlikely, prior to enclosure of the land during the post-medieval period.

The current consensus is that medieval moats were not designed to keep out attackers or wild animals, nor were they used as fire-breaks or for the storage of fish. These purposes cannot be ruled out as secondary functions, but moated sites were primarily intended to display the status of individual landowners and their houses, which were typically located in the centre of the enclosed area. This idea has emerged primarily because moats often had only two or three of their sides completed, and their ditches

were often too insubstantial to have stopped either people or animals from breaching them. Furthermore, many of the deepest medieval moats in Cambridgeshire occur not in isolated, vulnerable locations, but in the more secure nucleated villages (Taylor 1973, 127). This emphasis on a display of prestige is particularly applicable to post-medieval examples such as the moated garden feature at Childerley Chapel, which was situated in a highly visible location immediately adjacent to the main road between St Neots and Cambridge (Fig. 5.6).

Although the rectangular shape of the moat at Childerley Chapel is not unusual, its enclosed area of 5,400 m<sup>2</sup> is towards the upper end of the size range for moated sites. Two nearby examples of medieval moats at Eltisley and Comberton are much smaller: 1,600m<sup>2</sup> and 2,500m<sup>2</sup> respectively (Taylor 1973, 126). In morphology, the Childerley Chapel moat is similar to an example constructed nearby at Childerley Hall in the 16th century. The one at Childerley Hall (Fig. 5.11) comprised a particular type of 16th-century landscape-garden, surrounded by a quadrilateral moat with mounds at each corner; it has been identified as the best known example of its kind in England (Rackham 1986, 363). The Childerley Chapel moat lacked any evidence of mounds at its corners, but its prominent location near the main entrance to the Childerley Estate suggests that it was similarly designed to impress visitors, who would have been able to view both the internal, neat, formal gardens and the external, 'natural' parkland landscape of the surrounding Childerley Estate (Taylor 1973, 162). Such an arrangement of formal gardens in juxtaposition with open parkland was favoured by garden designers in the late 16th and early 17th centuries.

The date of the artefacts recovered from the moat, and the recovery of bowls, plates and a wine bottle from its infill (Appendix 3.4 and 7.1), is consistent with its use for outdoor entertainment events connected with the Childerley Estate during the post-medieval period. The gully across the entrance to the moat may have marked the position of a hedged boundary, or perhaps held an ornamental fence and gate, designed less for security than for aesthetic effect.

It has been suggested (Taylor 1973, 178) that the moat at Childerley Hall was created by the fifth Sir John Cutts, whose family lived in the Hall. He was also responsible for ordering the eviction of the inhabitants of Childerley village in the early 16th century, in order to create a large deer park around his house. The village comprised two medieval settlements, Great and Little Childerley; the remains of the village of Great Childerley are still visible as deep hollow-ways and house platforms south-east of the Hall, adjacent to the formal gardens. The platforms of

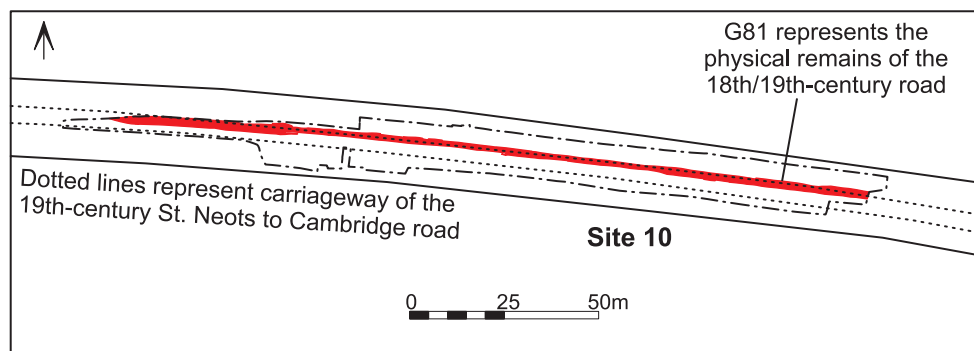


Figure 5.10 Camford Way (Site 10): the St Neots to Cambridge road



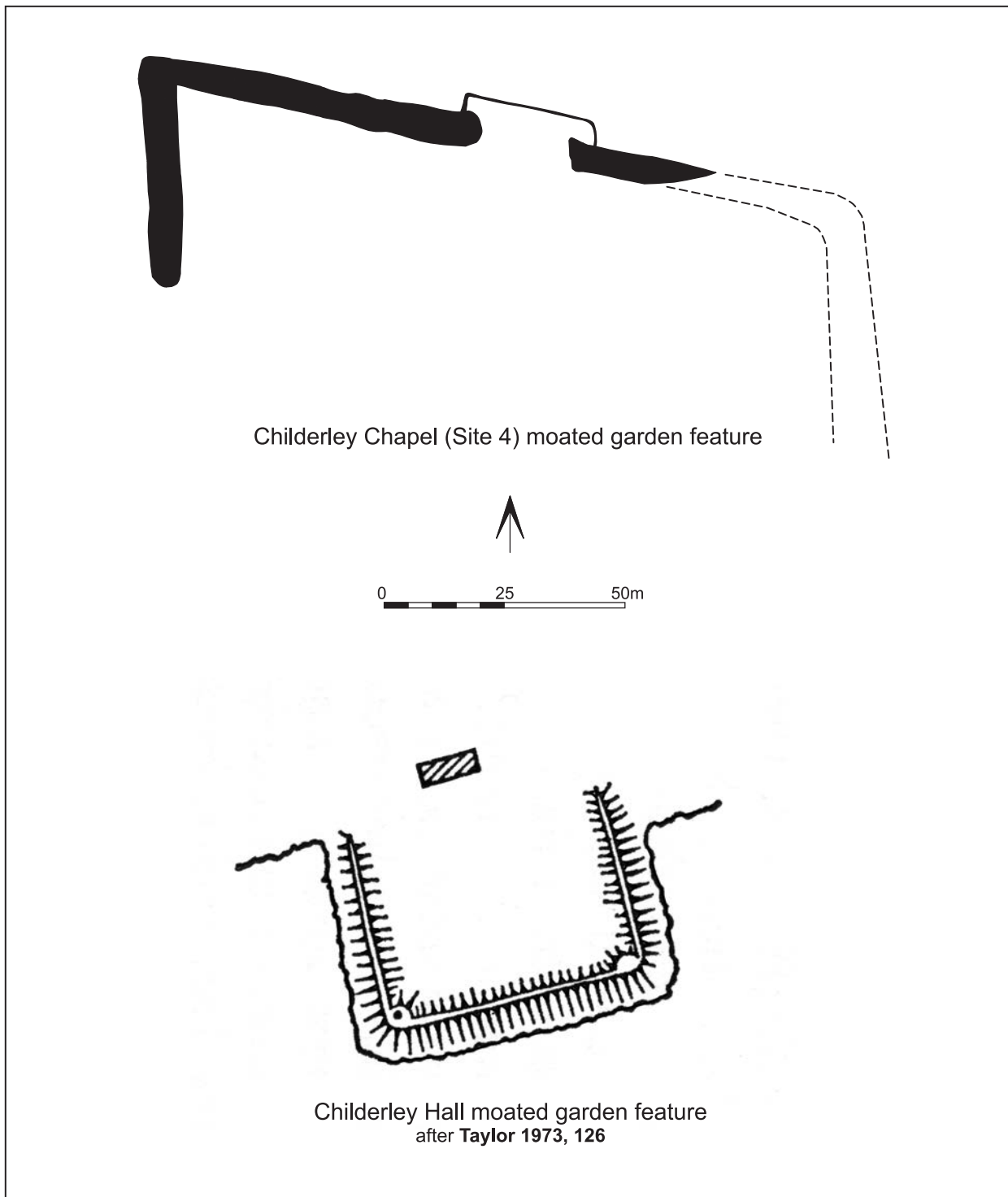


Figure 5.11 A moated garden feature at Childerley Hall (after Taylor 1973) compared with the Childerley Chapel example

its former tofts lie along hollow-ways south of a street *c.* 240m in length. Little Childerley was located to the west of Childerley Hall, and the earthwork remnants of this village were ploughed out in the 1950s (Wright and Lewis 1989, 39). It is possible that the same man may have ordered the construction of the moat at Childerley Chapel, although the balance of evidence suggests that it was probably created at a slightly later date to that of the Childerley Hall example.

The disappearance of this formal garden feature from the local landscape can be followed on historical maps and aerial photographs (Fig. 5.6). It was still visible in a complete form on the 1886 first edition OS map, but began to disappear from cartographic sources after this date. The western and northern sides of the moat had been completely infilled and ploughed over by 1969, when the Meridian Series of aerial photographs was taken.

## 6. Cross-period synthesis

### 6.1. Introduction

Two decades ago, the nature and value of the archaeological resource of the clay uplands to the west of Cambridge were largely unknown. Since then, development-led archaeological investigations have generated a wealth of information, particularly about the land immediately to either side of the A428. Although characterisation of this landscape is still at an early stage, a distinctive picture of alternating periods of change and continuity is beginning to emerge. As one of the first major publications on the area, this volume has frequently had to draw on comparative data from elsewhere. Local parallels could not always be cited for some of the interpretations offered but the latter will, it is hoped, provide a framework that can be tested by future fieldwork and research.

Although Cambridgeshire is less topographically varied than many English counties, the plateau that forms the northern edge of the Bourn Valley does have its own distinctive character. The excavations along the line of the A428 have provided an insight into how this landscape developed in the past and have emphasised how it differs from both the lower-lying Bourn Valley to the south and the fens to the north, into which the Dam Brook and Callow Brook drain.

The city of Cambridge lies at the eastern end of the plateau, with the A428 providing a westward link to St Neots, the modern A1 and beyond. However, the plateau has always been an important communications route since the area was first settled (Chapter 3.1.1). Its origins lie in the course of a prehistoric ridgeway, which subsequently became a link between Ermine Street and *Durolipons*, the Roman predecessor of Cambridge. The route remained in use throughout the medieval period, before developing into the St Neots to Cambridge road during the 19th century. It was traditionally a strip of land used primarily for agriculture. Settlement was generally confined to periods of increased population pressure. Only now is the area becoming more densely inhabited, as the marginal nature of the land in agricultural terms has little relevance to the modern settlements being established there.

The results of the excavations within the road scheme have been described and interpreted in detail in the preceding chapters. Here, themes that transcend chronological periods are considered in an examination of the common factors that have affected the users and inhabitants of the plateau from the Iron Age to the present day.

### 6.2. Character and organisation of the landscape

(Figs 1.3–1.4, 1.10–1.11, 4.1–4.2, 5.1–5.2, 5.10)

Most of the excavations were located on the plateau itself. The exception was Site 7 at Scotland Farm, which lay within one of the shallow valleys that run off to either side of the higher ground (Figs 1.3 and 1.4). Although the plateau has its own distinctive characteristics, the

excavation results can be used to help characterise the historic land-use of a wider area by combining them with work carried out by local landscape historians such as Susan Oosthuizen, Christopher Taylor and Tom Williamson. Cartographic and documentary data can provide rich insights into the medieval and post-medieval landscapes in particular. The excavated remains from the Iron Age and Roman periods can supplement this historical data, allowing the formulation of a more substantive model of how the landscape has developed since the Iron Age.

Examination of cartographic data reveals a prevalent NE–SW orientation in the landscape of the Bourn Valley (Fig. 5.2). This reflects the local topography, with a series of winterbournes located in shallow valleys on this alignment draining water from the watersheds on either side of the valley into the Bourn Brook (Fig. 1.4). It is argued (Oosthuizen 2006, 70, fig. 4.1) that these shallow valleys have dictated a multitude of artificial, man-made boundaries which cross the Bourn Valley and extend north-eastwards in the direction of the fens: ‘it is as if a net were lowered gently over the landscape so that where it fell on flat ground the linear pattern of the net remains more or less unchanged, but where it fell on uneven ground the pattern of the net became deformed or distorted by the topography’ (Warner 1996, 49–52). Oosthuizen (2006, 87) suggests that these boundaries date to the Iron Age:

how much earlier these long, cross-valley alignments are than the Roman period is suggested by their character. They seem more like the Iron Age ‘spinal’ and ‘subsidiary linears’ of Salisbury Plain than like the co-axial layouts of Bronze Age Dartmoor. The parish boundaries of the Bourn Valley, running along the Mare Way and St Neots [to Cambridge] ridgeways, resemble ‘spinal linears’ since they run along watersheds, while the cross-valley alignments are similar to ‘subsidiary linears’: they are slightly sinuous in character, they lie about just over 200 yards apart, and they divide the landscape up into strips which incorporate all the environmental differences of the valley bottom, slopes and top pastures.

As Figure 5.2 illustrates, the modern political map of the Bourn Valley has been shaped by NE–SW aligned ‘subsidiary linears’ running either side of the valley’s northern edge, roughly perpendicular to the Bourn Brook.

A number of the NE–SW aligned boundaries that can be identified from cartographic sources were also encountered during the course of the excavations. Some were extant ditches that marked the location of field boundaries and sometimes also parish boundaries; others were the shallow, natural valleys within which the Dam Brook and Callow Brook were located. In addition, sub-surface remains on the same alignment provide archaeological support for the landscape model described above. These most notably include the middle Iron Age

farmstead identified on Sites 7 and 8 at Scotland Farm (Chapter 2.2; Fig. 1.11), and the Roman farmstead revealed at Childerley Gate (Chapters 3–4; Fig. 1.10). The enclosures on Site 7 at Scotland Farm were located at the bottom of the shallow valley containing the Dam Brook. They are likely to have been contemporary with the earliest attempts to manage the winterbourne in this valley (Chapter 2.2.5) and their creation was directly influenced by the local topography. The NE–SW alignment is especially predominant in this area, as can be seen in the orientation of the shallow valleys, the alignment of the farmstead, and the modern Scotland Road (Fig. 1.11). In contrast, the farmstead at Childerley Gate was located on roughly flat land. There was no immediate topographical reason for its NE–SW alignment but it was still influenced by the general orientation of the wider landscape, the persistence of which can be seen in the extant field boundaries that run parallel to the farmstead (Fig. 5.9).

The archaeological evidence complements the cartographic sources, suggesting that a NE–SW orientation has been prevalent in the landscape of the Bourn Valley since the middle Iron Age. However, this orientation is not uniform across the whole area. The NNW–SSE-aligned Roman farmstead at Ash Plantation (Chapter 3.4) and the field systems between Caxton Gibbet and Childerley Chapel (Chapter 3.2) stand out for their divergence from the predominant alignment. It was due to the existence and influence of Ermine Street to the west (Fig. 5.2) — designed to create a fast, direct route from London to York with minimal concern for local topographic nuances. The land between Caxton Gibbet and Childerley Chapel is predominantly flat, and the presence of such a significant feature in the landscape appears to have taken precedence, locally, over the topographic framework of the wider area. There is also the possibility that the field systems were part of a large, perhaps imperial estate (Chapter 4.3.3), in which case it is more likely that they would have been aligned on a Roman structure than on the native landscape.

This tendency for the surrounding landscape to reflect the alignment of Roman roads is, in fact, further evidence that the predominant NE–SW orientation of the landscape within the Bourn Valley was established before the Roman period: Ermine Street crosses a number of NE–SW boundaries that were not influenced by its presence, suggesting that they were originally set out prior to the road's construction. Oosthuizen (2006, 82–83) comments that 'the south-westerly/north-easterly furlong boundaries that perpetuate these earlier cross-valley alignments ran parallel to each other across the central fields of Caxton. The land between these lay in long, if slightly irregular, rectangles. These rectangles have been bisected into triangles by Ermine Street, suggesting the road is later than the cross-valley alignments'. Ermine Street continued to have a strong effect on the local landscape long after its construction, and was recognised as one of the four main medieval English highways (Watling Street, Ermine Street, Fosse Way and Icknield Way) under the protection of the king (Hindle 2002, 6). Williamson (2003, 78) comments that whole communities in Arrington, Caxton, Kneesworth and Papworth Everard moved towards Ermine Street (then the Great North Road) during the 12th–13th centuries, leaving their churches stranded in open country rather than at the heart of a nucleated settlement.

Another Roman road (though a much smaller one) can also be seen to have had an effect on the orientation of its immediate environs. The Roman enclosures at Bourn Airfield, particularly those of the 4th-century settlement (Chapter 4.2; Figs 4.1 and 4.2), were aligned north–south, in contrast to all the other Roman remains that were excavated. Although no physical trace of a road was found, there is evidence that the northern edge of the Bourn Valley was used as a communication route since at least the Iron Age (Chapter 3.1.1), and it seems probable that the settlement at Bourn Airfield was aligned perpendicular to a contemporary minor road. The only other features that shared this north–south alignment were the furrows between Caxton Gibbet and Childerley Chapel (Fig. 5.1), which are equally likely to have been aligned perpendicular to the St Neots to Cambridge road that began to develop in the medieval period (Chapter 5.2).

Even though the route along the northern edge of the Bourn Valley appears to have been used as a track or road of varying magnitude for more than 2,000 years, it does not seem to have developed into a major route until the last century, although a concrete road, known locally as the St Neots to Cambridge road, was constructed in the 19th century (Chapter 5.3.4; Fig. 5.10). From the medieval period, however, it does seem to have been formally maintained as a parish boundary (Fig. 5.2), constituting a strip of common land over which the residents of each parish had common grazing rights (Williamson 2003, 75).

The landscape in the Roman period, to the south of the A428 at least, was traversed by a wide network of intermeshing drove-ways (Chapter 3.3). In the Iron Age, however, there is less evidence for this; in particular, none of the farmsteads at Scotland Farm, Knapwell (Wessex Archaeology 2003, 40–52) or Caldecote Highfields (Kenney 2007) contained a drove-way, or appear to have had any connection with the ridgeway, despite their proximity to it. The enclosure at Bourn Airfield (Chapter 2.3) and the farmsteads may have used informal tracks, or drove-ways that were defined by hedges rather than ditches. Overall, however, the evidence for the Iron Age suggests less movement around the landscape than in the Roman period. The significance of this is unclear. It may indicate a lower density of settlement, with a larger area of grazing around each farmstead, or it may point to overgrazing in the Roman period, forcing people to move their animals more frequently in search of good pasture.

### 6.3. Settlement characteristics

(Fig. 1.4)

When considering the pattern and types of settlement in the area west of Cambridge, a distinction can be made between the area close to the A428 and the wider landscape. The excavations revealed four Iron Age or Roman farmsteads close to the road, in addition to those previously discovered at Vicar's Farm (Evans and Lucas forthcoming), Caldecote Highfields (Kenney 2007) and Cambourne (Wessex Archaeology 2003), yet there is no evidence of any substantial medieval settlements for at least a mile on either side of the modern A428 road.

The Iron Age and Roman farmsteads at Ash Plantation, Bourn Airfield, Childerley Gate and Scotland Farm (Fig. 1.2) were all quite small, dispersed, low-status settlements. Fine wares accounted for only a small percentage of the Roman pottery assemblage, with most

of the Iron Age and Roman pottery made locally. The volume of non-ceramic artefacts recovered was small, excluding the coin hoard from Childerley Gate, with no more than a handful of items that are indicative of ostentation. This matches the picture seen at Cambourne and Caldecote Highfields; none of the settlements was particularly remarkable for their assemblages of artefacts, and they seem superficially to have been very ordinary.

A slightly unusual aspect of the settlements at Ash Plantation and Scotland Farm is that they belong to a single period. Both settlements are likely to have been in use for about a century, yet there is almost no evidence of earlier or later occupation at either site. The farmstead at Childerley Gate was in use for a longer period of time, spanning the 2nd–5th centuries, yet there is similarly little evidence of settlement at any other period. This contrasts with Caldecote Highfields and, in particular, with the Lower Cambourne and Jeavons Lane farmsteads at Cambourne, which all produced evidence of both Iron Age and Roman occupation, if not continuity between the two. A possible explanation of this is the respective locations of the sites. The multi-period sites were all further from the centre of the Bourn Valley. The highest, most marginal ground on the plateau itself is more likely to have been settled through necessity, due to population pressures, than through choice. The layout of the individual farmsteads at Ash Plantation, Childerley Gate and Scotland Farm was relatively regular, perhaps indicating that they were established on previously unoccupied land, rather than developing out of pre-existing settlements. The high ground on the plateau appears to have been more sparsely settled than the lower ground on the upper slopes of the valley, only being used for anything other than pasture when the more favourable locations were already occupied.

In the medieval period, the higher ground was even more sparsely settled (Fig. 1.4), although rising population levels meant that much of the land was brought into cultivation (Chapter 5.2). A number of villages, with medieval origins, are located within 1km of both sides of the plateau but, generally, there have only ever been a few houses and farms on the high ground itself. Only now is this picture changing with the recent expansion of Hardwick and Caldecote Highfields, and the creation of the new town of Cambourne.

In the medieval period, the lower-lying areas to the north and south of the plateau were characterised by villages that were surrounded by contemporary farmsteads and hamlets, some of which have been shown by archaeological research to be Roman or earlier in origin (Taylor 1973, 59). This contradicts the traditional, historical model of the Saxon invasion sweeping away all traces of previous settlement, and leaving just one large, nucleated village of Saxon origin in each parish (Taylor 1973, 54). There is also an apparent lack of medieval planning in the structure of the landscape. The medieval open fields often incorporate earlier pre-medieval field systems and landscape boundaries (Williamson 2003, 74). This is an indication of continuity in the landscape, not change, with successive generations building on the achievements of their predecessors. It differs from the East Midlands, for example, where field systems generally appear to have been laid out during the medieval period to suit the requirements of the contemporary settlements.

The landscape on either side of the plateau is quite different to that of the high ground itself. It is broken up by narrow promontories, upon which the nucleated villages tend to sit. To the south, the villages are positioned between the tributary streams of the Bourn Brook, while to the north they sit between brooks which carry water northwards off the watershed and towards the fens. The modern villages have their origins in the late Saxon and medieval periods when settlement in this area was strongly nucleated. Oosthuizen (2006, 39–45) has demonstrated that the most favoured arable land during the late Saxon and early medieval periods was located on the lower slopes of the Bourn Valley adjacent to the Bourn Brook (Chapter 6.4). Consequently, this is where the larger nucleated settlements of the medieval period developed, often just below the spring line that marked the boundary between the low-lying arable land and the pastoral land which lay further up the side of the valley (Oosthuizen 2006, 60).

The few small, dispersed farmsteads on the higher ground also appear to extend back to at least the medieval or Saxo-Norman period. They tended to be located along the edges of the plateau, rather than at its very middle, perhaps due to the presence of a wide green-way along the line of the earlier ridgeway (Chapter 5.3.1). This green-way also marks a number of parish boundaries, which are shown elsewhere on pre-enclosure maps to have been lined by a strip of common land (Oosthuizen 2006, 82, fig. 4.5); the parish boundary between Hardwick and Comberton has been dated to the 10th century (Oosthuizen 2006, 81). Williamson (2003, 75–7, fig. 26) suggests that the small settlements at Swansley Wood Farm, Great Common Farm, Whitwell Farm, Knapwell Wood, Birds Pastures and Scotland Farm (Fig. 1.4) all have their origins in the medieval period, located close to, but not on, the route of the green-way. He suggests that they are subsidiary settlements related to the larger villages within each parish; Scotland Farm, for example, can thus be seen as a small farmstead associated with the nucleated village of Dry Drayton. The pattern visible on Figure 1.4 indicates that each parish would have had one nucleated village, located near arable land on the low ground, and one subsidiary settlement, situated on the higher, pastoral ground.

Another site named by Williamson as a possible subsidiary settlement is the moat at Childerley Chapel. Excavation, however, has shown this to be a moated garden feature dating to the 16th or 17th century, not a farmstead of any kind (Chapter 5.3.2). Ironically, this discovery only serves to strengthen Williamson's assertion that the isolated settlements were on the edge of the plateau, set back from the ridgeway. This was clearly not the case with the Childerley Chapel moated site, which was just 5m from the 20th-century road.

Thus the pattern of small, dispersed settlements along the high ground to the west of Cambridge has endured from the Iron Age through to the Roman, medieval and post-medieval periods. Unlike the lower land on either side of this plateau, however, the settlements never expanded or became nucleated. They all appear to have been generally low-status farmsteads, occupying marginal land that was unsuited to agriculture. The lower land on either side was much more prosperous and is where people chose to live when population levels were not too high. However, the emerging pattern of settlement

distribution on these clay uplands is still significantly more dense than was previously thought.

#### 6.4. The agricultural economy

(Fig. 5.2)

The extent to which an area is exploited either by pastoralism, arable cultivation, or a mixture of the two is determined by a variety of considerations, including topography, soil character and quality, cultural factors and economics. Identifying the economic base of a farmstead is critical to understanding the community that lived there, and this can be achieved by consideration of a variety of strands of evidence.

In many respects, the physical environment of the high ground immediately west of Cambridge has altered little since the Iron Age. The agricultural economy of the area during the medieval period is already well understood (Oosthuizen 2006). It is, therefore, worth reviewing this evidence first, before considering the economy of the Iron Age and Roman farmsteads.

Oosthuizen's work primarily uses toponymic evidence to demonstrate that the northern side of the Bourn Valley was predominantly used for pasture (Oosthuizen 2006, 32–3, fig. 2.11). The parish of Hardwick lies immediately south of the ridgeway (Fig. 5.2); its name is derived from *Heord* (herd) and *wic* (stock farm), suggesting the presence of a specialist farm for either sheep or cattle. Field names within the vicinity include Heard Common (Caxton, 1661), Herd Common and Hardmans Dean (Bourn, 1635 and 1820), Hardle Dean (Hardwick, 1602) and Cold Hard Common (Caldecote, 1854), which share a similar root to Hardwick and lie along the northern edge of the Bourn Valley (Oosthuizen 2006, 40). There was also a large grassland area, or *We(a)ld*, which extended westwards from Hardwick parish to include land in the parishes of Caldecote, Bourn and Caxton (Oosthuizen 2006, 40).

A further indication that pastoralism dominated the economy of the medieval townships in this area comes from the saints' days that were selected by parish churches as a dedication. These dedications were agreed in the early medieval period, no later than the 12th century, and offer an insight into which times of the year the ecclesiastical authorities felt were the most important for giving thanks. In the parishes of Bourn and Caxton, Saints' days fall in November, suggesting that thanks were being given to mark the end of a successful period of summer grazing (Oosthuizen forthcoming, 11). Conversely, saints' days in September gave thanks for the harvest; Hardwick's falls in September, while Caldecote has one in both September and November. However, the parishes all stretch south into the lower parts of the Bourn Valley, where place names suggest an arable economic base (Oosthuizen forthcoming, 12–13), which may explain this variation in the timing of saints' days. Significantly, these arable-related place names paint a bleak picture of the conditions for arable cultivation in these parishes, perhaps pointing to a local tendency towards pastoralism in preference to arable agriculture. Names such as Sowerditch Hill (Caldecote, 1615), Scumpitt Furlong (Hardwick, 16th century) and Pudding Lane (Caxton, 1820) have their roots in the badly drained, heavy nature of the soils, which were difficult to work and prone to collecting pools of standing water. The name Bellam Piece (Bourn, 1795)

perhaps suggests madness on the part of those trying to cultivate this land (Oosthuizen forthcoming, 12–13), the word being derived from the notorious 18th-century asylum called Bedlam.

With the exception of the 12th–13th-century high watermark for arable agriculture (Chapter 5.2), the toponymic evidence suggests that pastoralism was favoured during the Saxo-Norman and medieval periods. The archaeological excavations within the road scheme cannot be used to address this issue, largely because the medieval farmsteads that might supply the necessary evidence are located beneath modern farms (Williamson 2003, 75–7, fig. 26). However, the excavations did record the extensive physical remains of the arable fields created on the high ground during the 12th–13th centuries, as well as various post-medieval fields of a pastoral and arable nature (Chapter 5.3).

Although there are no cartographic or documentary data to offer a similar insight into agriculture in the Iron Age and the Roman period, it is unlikely to have differed greatly from the broad medieval pattern of pastoralism on the high ground and arable cultivation on the lower slopes. With the archaeological evidence, however, it is possible to attempt a more detailed description of animal and crop husbandry during these periods.

The evidence suggests that animal husbandry varied across the area during the Iron Age. Most Iron Age assemblages from southern England tend to show a dominance of sheep bones (Robinson and Wilson 1982, 48; Grant 1984, 105). However, there are a number of sites where cattle are numerically superior. These tend to be located in lowland areas and valleys with good access to water, which provide suitable pasturage for cattle (Wilson 1978, 136; Grant 1984, 117; Holmes and Rielly 1994, 531). The area between Cambourne and Hardwick is composed of shallow valleys containing winterbournes — an environment which would have been well suited for rearing livestock. The farmstead at Scotland Farm (Site 7) displayed a numerical dominance of cattle, with sheep or goats present in lesser quantities (Appendix 13.2.1), while cattle and sheep or goats were present in equal proportions, *c.* 48% of the assemblage each, on the contemporary settlement at Knapwell Plantation (Fig. 2.14) (Wessex Archaeology 2003, 49). Within the banjo enclosure at Caldecote Highfields, however, sheep or goats constituted almost half of the assemblage, whereas cattle only accounted for 22%, occurring in similar numbers to pigs (Kenney 2007). Similar percentages were also recovered from the Iron Age settlement at Lower Cambourne (Wessex Archaeology 2003, 27–8).

None of the four Iron Age farmsteads produced conclusive, direct proof for the presence of arable cultivation within the areas that were excavated, although quern stones were recovered from Scotland Farm and Caldecote Highfields, indicating that grain was being processed. This lack of evidence is in contrast to the Roman phase of the site at Caldecote Highfields, when a vineyard was created. The environmental evidence from Knapwell Plantation and Scotland Farm attests to the presence of grassland and scrub in the vicinity of the farmsteads, but gives no indication of cultivated land.

There is greater evidence for a mixed agricultural regime along the northern edge of the Bourn Valley during the Roman period. However, the archaeological evidence for the early Roman period seems rather polarised: the

land to the south of the Roman road was characterised by livestock enclosures and drove-ways (Chapter 3.3), while a large block of presumably arable fields was located to the north of the road (Chapter 3.2).

The evidence for animal husbandry still greatly outweighs that for crop husbandry on the Roman farmsteads. Ash Plantation (Chapter 3.4) produced a very small assemblage of animal bones, yet the morphology of the integrated enclosure and drove-ways clearly indicates the importance of livestock to the settlement. The morphology of the farmstead at Childerley Gate also indicates the importance of livestock, particularly during the latter half of the Roman period (Chapters 3.6 and 4.3). In contrast to the Iron Age, however, cattle were uniformly the dominant species throughout the Roman period. Only the sub-Roman settlement at Childerley Gate (Chapter 4.4) showed a predominance of sheep or goats, in line with sub-Roman or early medieval assemblages elsewhere in the country (Robinson and Wilson 1982, 61).

The details of the animal husbandry regime practised on the farmsteads varied between the Iron Age and the sub-Roman period (Appendix 13). Cattle appear to have been kept primarily for their secondary products in the Iron Age, whereas a mixed exploitation pattern was used throughout much of the Roman period, before reverting to secondary usage by the 5th century. Cattle appear to have been bred on the Roman farmstead at Childerley Gate. The sheep or goats appear to have been used for a variety of products throughout the Iron Age and Roman periods, with evidence that they were being bred at both Scotland Farm and Childerley Gate. The general absence or very poor representation of other food species could relate to the poor condition of the faunal assemblage — pig bones are notoriously more delicate than those of cattle and sheep, particularly as this species is generally consumed when quite young — yet this explanation does not account for the absence of certain wild game, particularly deer. It is possible that the plentiful supply of beef meant that hunting was simply not necessary. Horses, however, were well represented on the farmsteads at Scotland Farm and Childerley Gate, with evidence of breeding at the latter.

Larger plant assemblages were recovered from the Roman farmsteads than from the Iron Age ones, yet the farmsteads at Ash Plantation, Bourn Airfield and Childerley Gate still produced no more than a handful of soil samples with a high density of plant remains. Palaeoenvironmental evidence for crop husbandry was more forthcoming from the farmsteads excavated at Cambourne (Wessex Archaeology 2003, 96), yet pastoralism still seems to have been at least as important. Vicar's Farm (Evans and Lucas forthcoming) was the only

settlement in the area with substantial evidence for grain production, perhaps geared towards creation of a surplus. However, it was located on the lower ground on the edge of Cambridge, while the settlement at Lower Cambourne was also at a slightly lower altitude than the farmsteads along the line of the A428.

The agricultural economy of the Iron Age and Roman farmsteads along the northern edge of the Bourn Valley thus appears to mirror that proposed for their medieval equivalents (Oosthuizen 2006) — pastoralism on the upper slopes of the valley and the plateau, with arable cultivation on the lower-lying ground within the valley. However, some doubts do remain, particularly as to whether the palaeoenvironmental evidence is representative. It is worth reflecting that the main evidence for arable cultivation comes not from assemblages of charred or waterlogged plant remains, but from structural and artefact evidence. The two best indicators of crop production are the arable fields between Caxton Gibbet and Childerley Chapel (Chapter 3.2) and the recovery of a bar share from a 4th-century enclosure at Childerley Gate (Chapter 4.3.1), while crop processing is best attested by the recovery of quern stones from the Iron Age farmstead at Scotland Farm.

Three possibilities remain: the dearth of palaeoenvironmental evidence is either a genuine reflection of the dominance of pastoralism over arable cultivation within these farmsteads; or it indicates that ground conditions were inappropriate for the survival of such material; or it simply means that the fields themselves lay beyond the excavation limits. The second is perhaps most likely, although the occasional survival of large assemblages of charred plant remains, *e.g.* that from one of the rubbish pits at Childerley Gate (G95, Chapter 4.3.1), suggests that poor preservation cannot be held wholly responsible for the lack of arable evidence. Equally, although some of the farmsteads, particularly the one at Childerley Gate during the 4th century, may have been growing crops beyond the excavated areas, it is perhaps unrealistic to expect that the economy of each farmstead can be wholly inferred from what was found there.

Although many Iron Age and Roman farmsteads across the country are thought to have been self-sufficient in terms of meat and grain, the marginal nature of the clay uplands to the west of Cambridge perhaps made self-sufficiency unfeasible. The pattern of agriculture in the medieval period within the Bourn Valley was characterised by pasture on the high ground and arable cultivation on the lower-lying valley sides. Wider research and future investigation of more sites may confirm that this pattern can be traced all the way back to the Iron Age.

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## Manuscript Sources

These maps and aerial photographs were viewed at the Cambridgeshire County Record Office.

### Maps

<i>Details</i>	<i>Date</i>	<i>Fields</i>	<i>Reference</i>
Robert Morden Map of Cambridgeshire	1695	-	P40/28/11
Bourn Enclosure Map	c. 1808	8–12	Q/RDC35
Caldecote Enclosure Map	1854	-	Q/RDC76
Hardwick Enclosure Map	1837	19	Q/RDc51
Caxton Enclosure Map	1834	1–2	QRDc49
Caldecote Tithe Map	1851	-	296/p8
Bourn Tithe Map	1842	8–12	P14/27/1–2
Hardwick Tithe Map	1838	19	515/P
Childerley Tithe Map	1850	14–15	TR
1st Edition OS 25"	1886	24	XXXIX.9
1st Edition OS 25"	1886	1–2	XXXVIII.12
1st Edition OS 25"	1886	18–23	XXXIX.11
1st Edition OS 25"	1886	8–9, 10–12, 24	XXXIX.13
1st Edition OS 25"	1886	12–18	XXXIX.14
2nd Edition OS 25"	1901	24	XXXIX.9
2nd Edition OS 25"	1901	1–2	XXXVIII.12
2nd Edition OS 25"	1901	8–12	XXXIX.13
2nd Edition OS 25"	1901	12–18	XXXIX.14
2nd Edition OS 25"	1901	18–23	XXXIX.15
3rd Edition OS 25"	1924	12–16	XXXIX.14

### Aerial Photographs

<i>Details</i>	<i>Year of flight</i>	<i>Fields</i>	<i>Reference</i>
Fairey Series	1949	1–2, 8, 14–17	201068–201071 201017–201018
Meridian Series	1969	1–2, 8, 14–17	

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