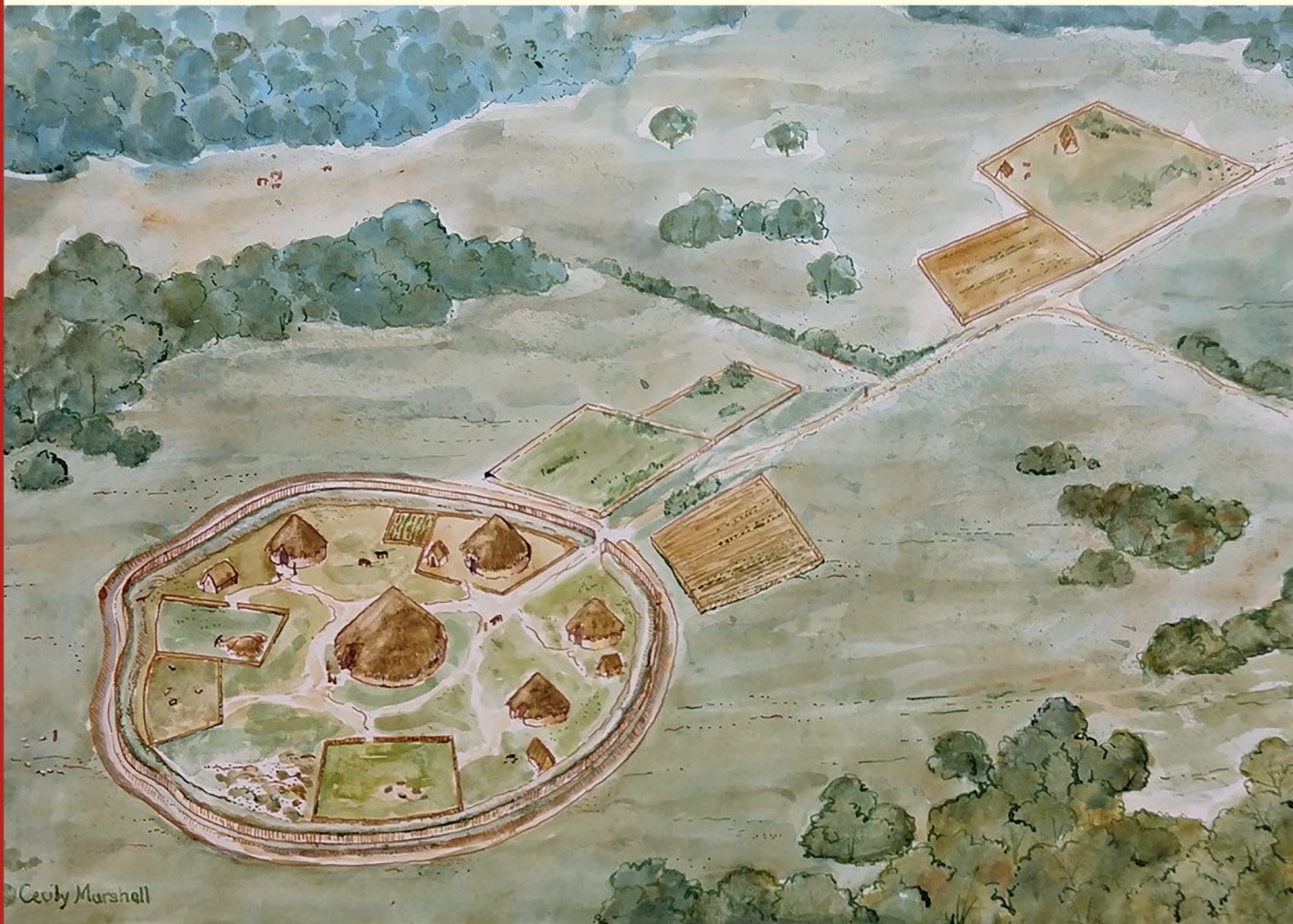


FROM BRONZE AGE RINGWORK TO ANGLO-SAXON SETTLEMENT: LANDSCAPE EVOLUTION IN THE MIDDLE NENE VALLEY AT THRAPSTON, NORTHAMPTONSHIRE



BY MIKE LUKE AND TORI GUY



From Bronze Age ringwork to Anglo-Saxon settlement: landscape evolution in the middle Nene Valley at Thrapston, Northamptonshire

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With contributions by

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Cover illustrations

- Front:** Reconstruction of the late Bronze Age/early Iron Age ringwork, looking south (by Cecily Marshall)
- Back:** Back (top): Aerial view of the development area with A14 in the foreground and Thrapston in the background, looking north-west
Back (bottom): Reconstruction of the early Anglo-Saxon settlement, looking south-east (by Cecily Marshall)

Contents

List of Figures	iv
List of Tables	v
List of Plates	vi
List of contributors	vii
Acknowledgements	viii
About this publication	ix
Summary	xi
Chapter 1. Introduction and discussion	1
1.1 Introduction	1
1.2 Discussion	5
Chapter 2. Site sequence.....	15
2.1 Pre-Bronze Age (Phase 1)	15
2.2 Middle Bronze Age/early Iron Age (Phase 2)	15
2.3 Early/middle Iron Age (Phase 3)	22
2.4 Late Iron Age/early Roman (Phase 4)	26
2.5 Early Anglo-Saxon (Phases 5 and 6).....	31
2.6 Medieval (Phase 7).....	41
2.7 Post-medieval (Phase 8)	42
Chapter 3. Artefacts.....	45
3.1 Pottery	45
3.2 Other artefacts	47
Chapter 4 Ecofacts	51
4.1 Animal bone	51
4.2 Charred and waterlogged plant remains	55
4.3 Charcoal	63
4.4 Human remains	65
Appendix I: Pottery	69
Appendix II: Coins.....	70
Appendix III: Radiocarbon dates.....	71
Bibliography	73

List of Figures

Chapter 1: Introduction and discussion

Figure 1.1: Location plan	1
Figure 1.2: All-features plan.....	3
Figure 1.3: Comparative phase plans (Phase 2, 3, 4 and 5/6)	6
Figure 1.4: Comparative plans of ringworks at Thrapston, Queen Mary Hospital, Castle Hill, Springfield Lyons, Rams Hill and Taplow Court.....	7
Figure 1.5: Comparative plans of Anglo-Saxon settlements at Thrapston, Brixworth, Pennylands and Furnells	11
Figure 1.6: The Anglo-Saxon settlement at Thrapston with a grid based on the short perch (4.6m).....	12

Chapter 2: Site sequence

Middle Bronze Age/early Iron Age (Phase 2)

Figure 2.1: Overview plan of middle Bronze Age/early Iron Age (Phase 2)	15
Figure 2.2: Southern part of settlement SL1	16
Figure 2.3: Selected sections from Fig. 2.2	17
Figure 2.4: Northern part of settlement SL1	19
Figure 2.5: Post-built structures L20	20
Figure 2.6: Cremation cemetery L19	21
Figure 2.7: Ringwork SL2.....	22

Early/middle Iron Age (Phase 3)

Figure 2.8: Overview plan of early/middle Iron Age (Phase 3)	23
Figure 2.9: Activity focus SL3	24
Figure 2.10: Selected sections from Fig. 2.9	25

Late Iron Age/early Roman (Phase 4)

Figure 2.11: Overview plan of late Iron Age/early Roman (Phase 4)	26
Figure 2.12: Trackway L28 and enclosures L24 and L26	27
Figure 2.13: Selected sections from Fig. 2.12	28
Figure 2.14: Enclosure L27 and pits L22 and L25 (SL5)	29
Figure 2.15: Selected sections from Fig. 2.14	30
Figure 2.16: Activity focus SL6	30

Early Anglo-Saxon (Phases 5 and 6)

Figure 2.17: Overview plan of early Anglo-Saxon (Phase 5 and 6)	31
Figure 2.18: Ground-level buildings and structures within settlement core SL7	32
Figure 2.19: Ground-level buildings G63, G71 and G76 (all SL7), with selected sections	36
Figure 2.20: Ground-level buildings G81, G82 and G87 (all SL7), with selected sections	37
Figure 2.21: Ground-level buildings G92, G96 and G125 (all SL7), with selected sections	38
Figure 2.22: Ground-level buildings G22 and G23 (both SL8), with selected sections	39
Figure 2.23: Possible SFBs G38, G118 and G151 (all SL9), with selected sections	40

Medieval (Phase 7)

Figure 2.24: Overall plan of medieval (Phase 7) open-field systems.....	41
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Post-medieval (Phase 8)

Figure 2.25: Overall plan of post-medieval (Phase 8) quarrying	42
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Chapter 4: Ecofacts

Figure 4.1: Chart showing the percentage of identifiable human bone by body area	67
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List of Tables

Chapter 1: Introduction and discussion

Table 1.1: Summary of Thrapston and other ringworks	8
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Chapter 2: Site sequence

Table 2.1: Middle Bronze Age/early Iron Age (Phase 2) post-built structures	17
Table 2.2: Middle Bronze Age/early Iron Age (Phase 2) cremation burials	18
Table 2.3: Early/middle Iron Age (Phase 3) and late Iron Age/early Roman (Phase 4) water-pits	26
Table 2.4: Early Anglo-Saxon (Phase 5) ground-level buildings L31 and L32	34
Table 2.5: Early Anglo-Saxon (Phase 5) possible sunken-featured buildings	40

Chapter 3: Artefacts

Table 3.1: Pottery quantification by Phase	45
Table 3.2: Pottery sherd count by Phase, Site Landscape and Land-use Area	46
Table 3.3: Quantification of other artefacts by material	47

Chapter 4: Ecofacts

Table 4.1: Animal bone preservation by context	51
Table 4.2: Animal bone preservation by NISP	51
Table 4.3: Animal bone species counts by phase	51
Table 4.4: Cattle element counts (NISP)	52
Table 4.5: Cattle and sheep/goat mandibular tooth and epiphyseal aging data	52
Table 4.6: Common measurements of cattle from Phase 3 and 1997 ringwork excavation	53
Table 4.7: Sheep/goat element counts	53
Table 4.8: Pig element counts (NISP)	54
Table 4.9: Horse element counts (NISP)	55
Table 4.10: Analysed samples for charred plant remains by feature type and phase	55
Table 4.11: Charred plant remains from Phase 2 settlement SL1	56
Table 4.12: Charred plant remains from Phases 3–5	59
Table 4.13: Waterlogged plant remains from Phase 3 pond G56 (L3)	61
Table 4.14: Charcoal from Phase 2 cremation burials associated with settlement SL1	63
Table 4.15: Charcoal from Phase 2 non-cremation-related features in settlement SL1	64
Table 4.16: Charcoal from Phase 3 features	64
Table 4.17: Total weight of burnt bone from Phase 2 settlement SL1	65
Table 4.18: Animal bone recovered from cremation burials in Phase 2 settlement SL1	65
Table 4.19: Fragment size of cremated human bone from Phase 2 settlement SL1	66
Table 4.20: Colour of the burnt human bone from Phase 2 settlement SL1	66
Table 4.21: Sex and age at death of cremated individuals from Phase 2 settlement SL1	67

Appendices

Table A1: Pottery type series	69
Table A2: Coins	70
Table A3: Summary of radiocarbon determinations ordered by SUERC lab number	72

List of Plates

Chapter 1: Introduction and discussion

Plate 1.1: Aerial view of the development area with A14 in the foreground and Thrapston in the background, looking north-west	2
Plate 1.2: Aerial view of the excavations with the trenches dug across the ringwork ditch in the background, looking north-east	4
Plate 1.3: Aerial view of the main excavation area, looking north-west.....	4
Plate 1.4: Reconstruction of the late Bronze Age/early Iron Age ringwork, looking south (by Cecily Marshall)	9
Plate 1.5: Reconstruction of the early Anglo-Saxon settlement, looking south-east (by Cecily Marshall)	10

Chapter 2: Site sequence

Plate 2.1: Circular structure G65 (L20) during cleaning, looking south.....	18
Plate 2.2: Inhumation F1141 (L20), looking west. Scale 0.4m.....	18
Plate 2.3: Water-pit F253 (L10) prior to extension of excavation area, looking north. Scale 1m.....	25
Plate 2.4: Quarry pits L22, looking north. Scale 1m.....	28
Plate 2.5 Aerial view of ground-level buildings G81, G82, G76, G71 and G125, looking south-east	33
Plate 2.6: Ground-level building G81 (L31), looking west. Scale 1m.....	33
Plate 2.7: Ground-level building G81 (L31), looking south prior to excavation of F1012. Scale 1m.....	35
Plate 2.8: Ground-level building G125 (L31) during cleaning, looking south	35
Plate 2.9: Ground-level building G63 (L31), looking east. Scale 1m	37
Plate 2.10: Aerial view of post-medieval quarrying in north-east part of excavation area	43

Chapter 3: Artefacts

Plate 3.1: Decorated Iron Age vessel from L10 water-pits	45
Plate 3.2: Roman pottery including a base from a Phase 4 feature	45
Plate 3.3: Early-middle Anglo-Saxon ceramic loom weight (RA25)	48
Plate 3.4: Roman copper alloy toilet spoon (RA22)	49
Plate 3.5: Post-medieval pipe-clay wig curler (RA33)	49

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Overall

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Fieldwork

The fieldwork was managed by Mike Luke (Project Manager) and overseen by Ben Barker (Project Officer). In the field, it was supervised by Adam Williams with hand excavation and recording undertaken by Chris Booth, Jonathan Durman, Allan King, Gary Manning, Ernie Rizzo, Juha-Matti Vuorinen and Adrian Woolmer.

Metal-detecting was undertaken by Archie Gillespie and Mike Head, with dGPS survey by Mercedes Planas (Souterrain Archaeological Services). Earthmoving was undertaken by Whitmore Plant.

All finds were processed under the supervision of Jackie Wells (Finds Officer), who also, along with Holly Duncan, undertook the initial finds identification during fieldwork. Processing of the ecofact samples was supervised by Gary Edmondson. Digitisation of the site plans was undertaken by Joan Lightning.

Site tours for schools and the local community were undertaken by Tori Guy, Helen Parslow and Catie Watts, overseen by Iain Leslie.

Post-fieldwork

The post-fieldwork stages of the project were managed by Mike Luke. The provisional phasing hierarchy and contextual assessment were undertaken by Adam Williams and Jo Barker, with additional work by Tori Guy and Catie Watts.

The same specialists worked on both the assessment and the analysis/publication – they are duly acknowledged as contributors within this publication. Preliminary artefact identifications and catalogues were by Holly Duncan (formerly of Albion Archaeology). In addition, all ironwork and selected non-ferrous objects were x-rayed by Pieta Greaves (Drakon Heritage and Conservation) and the samian ware was identified by Jill Eyers (Chiltern Archaeology). We are grateful to John Blair for his comments and suggestions regarding the Anglo-Saxon grid-planning. All Albion projects are under the overall management of Drew Shotliff (Operations Manager), who also had the task of reading, commenting on and editing the entire publication.

Photographs

All the photographs published here are Albion Archaeology copyright including Plates 1.1–1.3, 2.5 and 2.10 which were taken by Commission Air Ltd.

Photographer credits within the main publication: Chris Booth (Plate 2.3), Jonathan Durman (Plate 2.5), Gary Manning (Plate 2.4), Juha-Matti Vuorinen (Plate 2.2), Adam Williams (Plates 2.1, 2.6, 2.7, 2.8, 2.9). All artefact photographs were taken by Adam Williams.

About this publication

Structure

Following this preamble, both the introduction and the discussion of results are presented in Chapter 1. Chapter 2 contains a phased chronological description of the evidence. The text is typically arranged by Site Landscape (SL), e.g. settlement, ringwork etc., with sub-divisions for more significant Land-use Areas (L), e.g. enclosures, trackway etc., and Groups (G), e.g. buildings, water-pits, other pits etc.

Plans, section drawings, and plates accompany the text. Significant artefactual/ecofactual evidence is included in Chapter 2 but the bulk of the data is presented in Chapters 3 and 4, which are supplemented by a number of detailed appendices.

Terminology and abbreviations

An understanding of the structural hierarchy is fundamental to an understanding of the layout and terminology used in this publication. This is described in more detail below (see Introduction: The archaeological background; Post-excavation analysis). The main elements comprise Phases (written in full), Site Landscape number (SL prefix), Land-use area number (L prefix) and Group number (G prefix). Feature numbers (F prefix) have only been used to distinguish individual features (especially in the case of burials). Lengths of ditch assigned to multiple group numbers are usually described together, e.g. G15/G16.

The majority of the features' fills were similar, so a generic description is given in the Introduction (Chapter 1). On site, slight variations in colour, soil matrix and inclusions were noted to distinguish between different fills. Such detail is only included in the Group text where it aids understanding of the evidence. In general, primary or lower fills tended to be lighter in colour and contain fewer stones.

The following terms and abbreviations are used throughout the publication:

Domestic focus: a concentration of buildings, other features and/or finds suggestive of a focus of activity, which for convenience has been described as 'domestic', but which might have included other activities, e.g. crafts, food-processing etc.

Ground-level building: whose plan is indicated by an (often rectangular) arrangement of postholes (after Blair 2018, 25).

SFB: sunken-featured building (typically Anglo-Saxon).

Structure: mainly used to describe a group of features that cannot be resolved into an obvious building, including, for example, two- and four-post arrangements (any period).

Gully versus ditch: used to distinguish the size of linear features, i.e. gully generally less than 0.7m wide and 0.4m deep, with ditches being larger.

Phases and chronological periods

The indicative date ranges for each phase are as follows:

- Phase 1: Pre-Bronze Age
- Phase 2: Middle Bronze Age/early Iron Age c. 1600–800 BC
- Phase 3: Early/middle Iron Age c. 800–100 BC
- Phase 4: Late Iron Age/early Roman c. 100 BC–AD 100
- Phase 5: Early Anglo-Saxon c. AD 400–650
- Phase 6: Medieval c. AD 1150–1500
- Phase 7: Post-medieval c. AD 1500–1750

Tables

Table numbering relates to the chapter number; e.g. tables in Chapter 2 are numbered 2.1, 2.2, etc.; whereas tables in Chapter 3 are numbered 3.1, 3.2 etc. The tables provide detailed information in an easy-to-view manner. Where possible, they have been standardised to allow quick and easy comparison between chapters.

Figures

Figure numbering relates to the chapter number; e.g. figures in Chapter 1 are numbered 1.1, 1.2, etc.; whereas figures in Chapter 2 are numbered 2.1, 2.2, etc.

Drawing conventions

Plans

The plans are only labelled with those elements of the structural hierarchy (e.g. SL, L or G numbers) referred to in the text. Most plans distinguish between excavated and unexcavated parts of features by the use of shade. Where relevant, earlier features are shown in a different colour or tone.

Where possible, section drawings are included on the plans for ease of reference. They are greyed to help distinguish them from features shown on the plan. In general, section drawings on plans are not labelled in order to keep the figures uncluttered.

Sections

The majority of the section drawings are at a scale of 1:40. Different line types are used for ‘cuts’ and their fills. All sections are positioned in the horizontal plane, but no OD heights are given. They are usually either south- or west-facing; if necessary, the original drawing has been mirrored. Section drawings are only labelled where it will aid understanding of the text. Accordingly, most fills are not labelled because they are not specifically mentioned in the text.

Reconstruction drawings

This publication includes two reconstruction drawings showing the late Bronze Age/early Iron Age ringwork and settlement (Plate 1.4), and the early Anglo-Saxon settlement (Plate 1.5). Although based where possible on the archaeological evidence, these inevitably require a degree of artistic licence to make them meaningful.

Appendices

Detailed information is presented in appendices: pottery type series (Appendix I); coin catalogues (Appendix II); radio-carbon dates (Appendix III).

Date of writing

The specialist reports were completed by the end of 2021 with the other text written in 2022.

Location of the archive

The archive has been deposited with the Northamptonshire Archaeological Resource Centre, under Event number ENN108629.

Summary

This report describes the results of Albion Archaeology's 2017 open-area excavation, undertaken in advance of residential development on land c. 600m south-east of the centre of Thrapston, Northamptonshire. The excavation area was centred on TL 0021 7818.

The development area was known to contain the greater part of a Bronze Age ringwork, which had first been identified as a cropmark on aerial photographs. The northern edge of the ringwork had been investigated in 1997 ahead of a separate housing development. Geophysical survey and trial trenching of the development area had confirmed the presence of the ringwork and (to its south-west) had identified a band of Bronze Age and Roman features. The surviving ringwork was preserved *in-situ* within the new housing estate.

The excavation recovered evidence for human activity spanning the middle Bronze Age to the post-medieval period. The most significant remains relate to the middle/late Bronze Age ringwork and adjacent settlement, and an early Anglo-Saxon settlement (which had not been identified by the evaluation). Also present were peripheral elements of middle Iron Age and late Iron Age/early Roman settlements, medieval fields and post-medieval quarrying.

As it was to be preserved *in-situ*, the middle/late Bronze Age (Phase 2) ringwork was only subjected to limited trial trenching. However, to enhance its interpretation the results of the 1997 excavation have been incorporated into the discussion section of this report. The ringwork was broadly circular, enclosing an area of c. 0.75ha. Many examples of late Bronze Age ditched enclosures are known across southern England. They exhibit considerable variation in form – shape, size, nature and size of ditch and bank/rampart etc. – and should probably not be viewed as a single, uniform monument class. They are sometimes referred to as 'ringforts' and considered to be of high status. The scale of the earthworks certainly demonstrates that their builders had the power to command considerable resources (labour and timber) at a time when land-enclosure was relatively rare. However, the Thrapston ringwork is still largely unexcavated and to date it has produced no other indicators of high status.

A contemporary settlement, c. 150m to the south-west of the ringwork and facing its entrance, covered an area of at least 1ha. It comprised an ephemeral enclosure system, which contained evidence for dispersed activity, 13 cremation burials, and one isolated inhumation. These features produced a small quantity of indeterminate late Bronze Age/early Iron Age pottery and nine middle–late Bronze Age radiocarbon dates. As is so often the case for this period, it is uncertain whether the remains outside the ringwork at Thrapston represent permanent settlement. It could be argued that the limited finds assemblage derives from periodic gatherings that were focused on the ringwork, although, to date, it has produced no clear evidence for activities such as feasting.

Both the early/middle Iron Age (Phase 3) and the late Iron Age/early Roman (Phase 4) settlements mirrored the location of the Phase 2 settlement. The former extended over c. 0.8ha and comprised storage pits, water-pits, and quarry pits. The main cluster of storage pits was situated north of the E–W band of quarry pits and water-pits, possibly indicating zonation of activities. The late Iron Age/early Roman settlement extended over c. 1.1ha and comprised an enclosure system with integral trackway. The absence of any roundhouses or post-built structures suggests that in both cases the settlement core lay beyond the excavation area.

The early Anglo-Saxon (Phase 5 and 6) settlement extended over c. 1.1ha. It comprised a concentration of at least nine rectangular ground-level buildings and at least 16 smaller possible buildings. Three possible SFBs were sited, presumably deliberately, along the south-east fringes of the settlement. Many of the building plans are partial and it is not certain that they were all in use at the same time. Nevertheless, the settlement's overall layout does exhibit a degree of regularity, as can be seen when a grid based on the short perch (c. 4.6m) is placed over it. The alignment of the grid also suggests that the late Iron Age/early Roman (Phase 4) ditched enclosures had an influence on the setting out of the Anglo-Saxon settlement. Evidence for grid-planning associated with Anglo-Saxon minsters has been demonstrated on several East Midlands sites and its appearance here may indicate a link with the major minster at Oundle, 3km downriver to the north-west. The low ratio of SFBs to ground-level buildings is perhaps a little unusual compared to other contemporary settlements where SFBs are usually more frequent, e.g. West Stow and Mucking. However, in Northamptonshire there are several settlements where SFBs were in the minority to ground-level buildings. It seems possible that the ratio observed at Thrapston may actually be more representative of the overall picture, given that the complete truncation of postholes is more likely than the complete truncation of SFBs. Of course, this assumes that the ground-level buildings and SFBs were in use at the same time and dating evidence is insufficient to determine whether this was the case.

In the medieval period, the area was incorporated into Thrapston's open fields. The alignment of the Phase 7 furrows appears to respect the alignment of the Phase 4 boundaries, with a headland corresponding to the location of the Phase 4 trackway. The extensive areas of post-medieval (Phase 8) quarrying bore no relation to previous land-use.

Chapter 1

Introduction and discussion

1.1 INTRODUCTION

This publication presents the results of archaeological investigations undertaken as part of the residential development to the south of Huntingdon Road, Thrapston, Northamptonshire (Fig. 1.1).

Planning and background to the investigations

In 2017 East Northamptonshire District Council granted planning permission for a c. 16.5ha residential development to the south of Huntingdon Road, Thrapston. Prior to the granting of planning permission,

the Northamptonshire County Council (NCC) County Archaeological Advisor (CAA) had advised that the known Bronze Age ringwork in the centre of the site should be preserved within the development and that other areas of archaeological significance should be subject to open-area excavation.

Albion Archaeology was commissioned by CgMs Consulting Ltd (now RPS Ltd) on behalf of their client, David Wilson Homes (South Midlands), to carry out the required archaeological work in advance of construction.

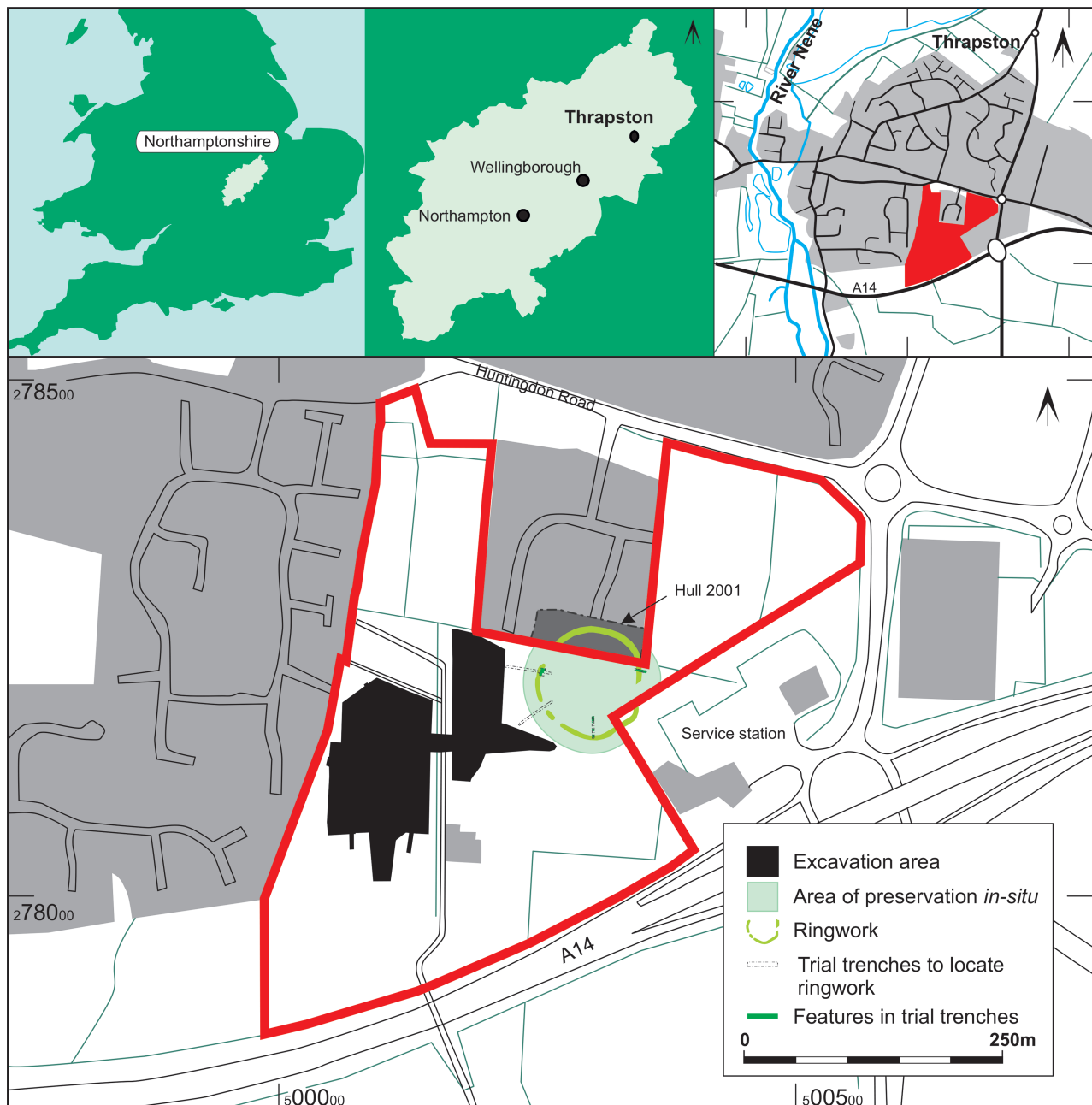


Figure 1.1: Location plan

Location, topography and geology

The development area was located c. 600m south-east of the centre of Thrapston, bounded by the A14 to the south, Huntingdon Road to the north, a service station to the east, and existing housing to the west (Fig. 1.1; Plate 1.1). The excavation area was centred on OS grid reference TL 0021 7818 and was c. 2.1ha in extent.

The site lies at c. 61m OD with the River Nene c. 900m to the west. Its central part is underlain by a deposit of glaciofluvial sand and gravel, with some boulder clay to the south-east. The solid geology comprises Blisworth limestone, mudstone and interbedded sandstone/siltstone.

Archaeological background and historical background

The Bronze Age ringwork (Fig. 1.1) was first identified as a cropmark on aerial photographs. In 1997 its northern edge was excavated in advance of housing development. The results were reported as follows:

Two main phases of activity were identified on the site, late Bronze Age and late Iron Age. There was no evidence of middle Iron Age occupation although a single linear feature, probably a gully, predated the enclosure ditch. Roman artefactual evidence was minimal and the Saxon period was not represented. Medieval activity appeared to be confined to ridge and furrow that overlay the Iron Age deposits. Modern activity was represented by quarrying and an animal burial pit to the north and west of the enclosure ditch. (Hull 2001, 87)

To the south-east the ringwork's ditch was also located by a trench dug in the corner of the service station site (Cadman 1991).

The archaeological investigations

Pre-application evaluation

Geophysical survey and trial trenching were undertaken to inform the planning application. In addition to the ringwork, the geophysical survey identified 'a scatter of potentially significant anomalies, the main cluster of which occurred to the west and south-west of the ringwork'. Thirty-four 60m-long trenches revealed a band of Bronze Age to Roman archaeological features extending south-west from the ringwork (Northamptonshire Archaeology 2007, 4–5). The ringwork itself was not trenched as it was to be preserved *in-situ* within the development.

Open-area excavation

The fieldwork took place between April and June 2017 (Fig. 1.2). Ploughsoil and subsoil were mechanically removed under archaeological supervision, exposing the underlying geological strata. The irregularly shaped excavation area targeted concentrations of archaeological features identified by the evaluation (Plates 1.2 and 1.3). All hand excavation and recording was carried out in accordance with a Written Scheme of Investigation (Albion Archaeology 2017a), prepared in response to a brief issued by the CAA (NCC 2016).

All isolated archaeological features were half-sectioned with the exception of graves, which were fully excavated. Initial segments through ditches were



Plate 1.1: Aerial view of the development area with A14 in the foreground and Thrapston in the background, looking north-west

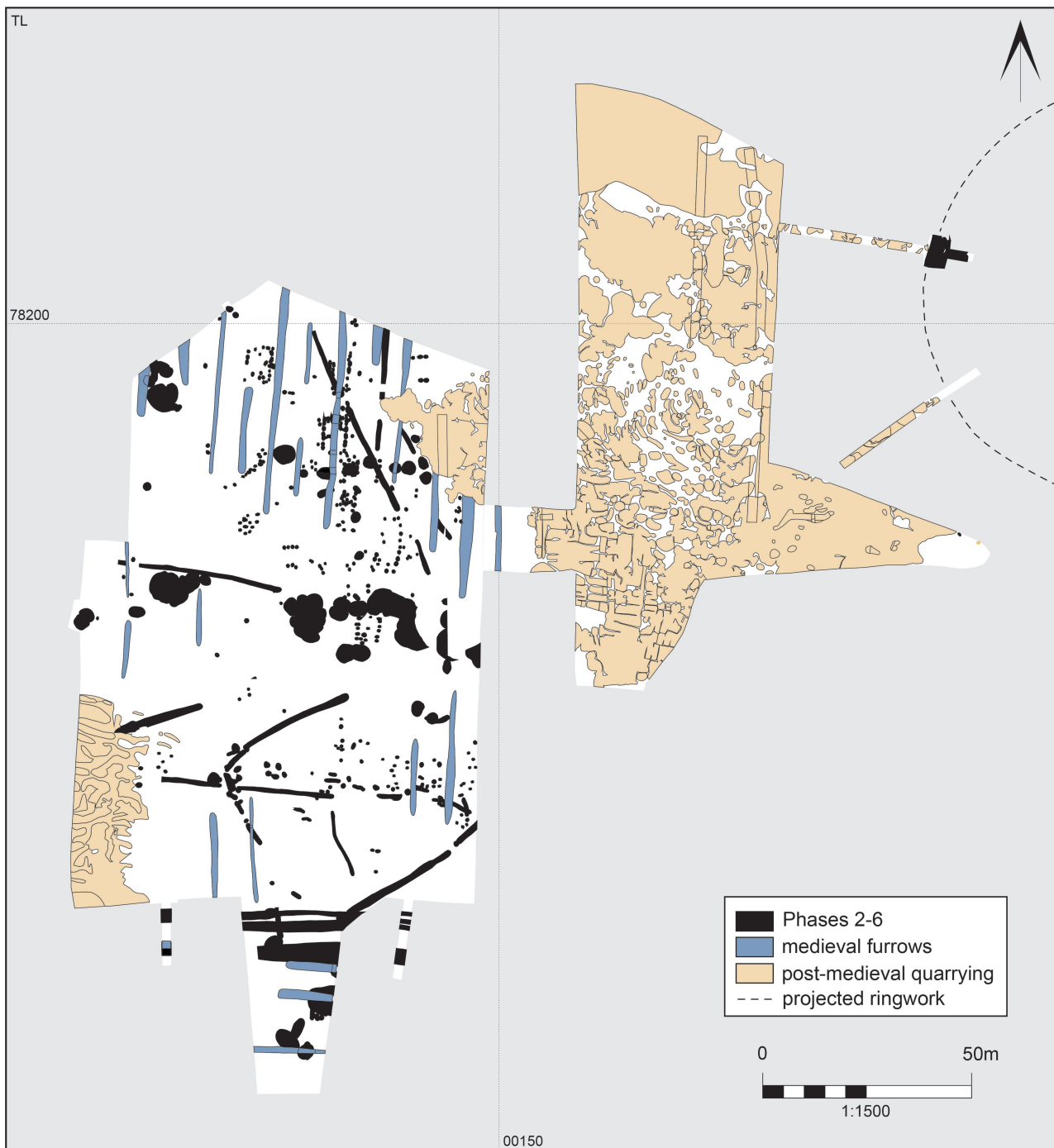


Figure 1.2: All-features plan

distributed evenly along their lengths, although potential variations in their upper fills were also targeted. The features typically contained firm, mid-grey-brown, silty clay, with occasional small to large-sized stones and charcoal flecks. Finds and ecofact processing was undertaken concurrently with fieldwork to maximise feedback into, and adjustment of, the excavation strategy.

A preliminary report was produced to coincide with school visits and open days (Albion Archaeology 2017b).

Mitigation trenching

During the open-area excavation four trenches were dug across the ringwork ditch (Fig. 1.1; Plate 1.2) to assist in the marking-out of the public open space within the residential development. As the ditch was to be preserved

in-situ, it was only subject to hand excavation in one trench (Albion Archaeology 2018).

Assessment and updated project design

An assessment and updated project design was produced in October 2019 (Albion Archaeology 2019), summarising the fieldwork results, assessing to what extent they could address local, regional, and national research priorities, and setting out the methodological basis for the post-excavation analysis.

Post-excavation analysis

The overall approach involved the manipulation of all data within a fully integrated, computer-based system of analysis. All structural, artefactual and ecofactual data were entered onto an Access database, creating an



Plate 1.2: Aerial view of the excavations with the trenches dug across the ringwork ditch in the background, looking north-east



Plate 1.3: Aerial view of the main excavation area, looking north-west

interface with the digital drawings and images. This allowed rapid and flexible analysis of the data, facilitating the creation of the text and plans which form the basis of this publication.

The methodology for the contextual analysis is summarised below; an understanding of the contextual hierarchy is essential as it underpins the structure of this publication. Analytical methodologies for the artefacts and ecofacts are summarised in the relevant sections. The updated project design (Albion 2019) contains full details of the methodologies applied to each data-set.

Contextual

In total, 1709 contexts were recorded on site. Albion Archaeology employs a standard approach to contextual analysis, requiring the assignment of contexts to a hierarchy. Each hierarchical level/element gradually becomes more interpretative and less detailed in nature. It should be borne in mind that it is the level within the structural hierarchy that is important, *not* necessarily the actual name of the hierarchical element (e.g. Phase, Site Landscape, Land-use Area etc.). An understanding of these terms is essential to the understanding of this publication.

During analysis, the contexts were combined into a hierarchy, comprising:

- **Phase:** broad, chronological divisions, e.g. middle Bronze Age/early Iron Age, early/middle Iron Age, late Iron Age/early Roman, early Anglo-Saxon, medieval.
- **SL (Site Landscape):** a collection of spatially coherent Land-use Areas, e.g. settlement, ringwork, enclosure system, dispersed activity.
- **L (Land-use Area):** a collection of broadly contemporary and spatially coherent groups, e.g. enclosures, trackway, cemetery.
- **G (Group):** a collection of features, e.g. buildings, structures, clusters of features, ditch lengths, etc.
- **F (Feature):** only used in this publication for graves and water-pits.

Phase, Site Landscape, Land-use Area, and Group provide the main framework for the presentation of the results within this publication.

Radiocarbon analysis

Scientific dating was attempted on key deposits to assist in finalisation of the site phasing. Fifteen radiocarbon determinations were undertaken by the Scottish Universities Environmental Research Centre (SUERC) using accelerator mass spectrometry (AMS) (Appendix III). The samples were submitted in stages, determined largely by the importance of achieving a date, the suitability of material and the completion of specialist analysis. Preference was given to material that was likely to be in a primary context, e.g. human burials. In other cases, preference was given to material from secure, undisturbed deposits; charred seeds were prioritised over charcoal owing to the potential longevity of wood.

The calibrated radiocarbon dates cited in the text are usually expressed to a 95% level of confidence cal AD/BC and have been determined from the University of Oxford Radiocarbon Accelerator Unit Calibration Program (OxCal14). All age estimates have been calculated using the internationally agreed IntCal 13 atmospheric curve.

1.2 DISCUSSION

Mike Luke, incorporating the work and ideas of Dana Challinor, John Giorgi, Tori Guy, Peter Guest, Mark Maltby, Natasha Powers, Drew Shotliff and Jackie Wells

The archaeological investigations recovered evidence for human activity spanning the middle Bronze Age to the post-medieval period. The most significant remains relate to the middle/late Bronze Age ringwork and adjacent settlement, and the early Anglo-Saxon settlement. Also present was peripheral evidence for settlements of middle Iron Age and late Iron Age/early Roman date, medieval fields and post-medieval quarrying.

Compartmentalisation of the prolonged period of past land utilisation into specific phases can usefully characterise activity at a particular point in time. Conversely, this process can also hinder an appreciation of continuity in the landscape. Hence the initial discussion of land-use, continuity and discontinuity, before the results are considered on a chronological basis.

Land-use, continuity and discontinuity

Although only partially investigated, the middle/late Bronze Age (Phase 2) ringwork appears to have been built on previously unoccupied land – as was the adjacent settlement to the south-west (Fig. 1.3). The early/middle Iron Age (Phase 3) settlement mirrored the location of the Phase 2 settlement. During the Iron Age, the ringwork was still visible in the landscape; finds of this date in the upper fills of its partially silted-up ditch suggest that it was still in use. However, the nature of that activity is unknown.

The late Iron Age/early Roman (Phase 4) enclosure system and trackway occupied the same area as the earlier settlements. However, boundary alignments differed, suggesting a degree of discontinuity. The ground-level buildings of the early Anglo-Saxon (Phase 5 and 6) settlement were laid out with reference to the Phase 4 enclosure system; some were positioned parallel to the former ditched boundaries. However, one of the three SFBs was dug into the southern ditch of the Phase 4 trackway. The Anglo-Saxon settlement was established c. 130m south-west of the ringwork. While this may be coincidence there is a known trend whereby early Anglo-Saxon settlements (and burials) appear to be located near to prehistoric monuments (Blair 2018, 89–90; Crewe 2012).

In the medieval period, the area was incorporated into Thrapston's open fields. The alignment of the Phase 7 furrows appears to respect the alignment of the Phase 4 boundaries, with a headland corresponding to the location of the Phase 4 trackway. The extensive areas of post-medieval (Phase 8) quarrying bore no relation to previous land-use.

Middle Bronze Age/early Iron Age

The earliest firm evidence for human activity within the excavation area comprised a ringwork and adjacent settlement (Fig. 1.3).

Ringwork SL2

The ringwork was originally identified as a cropmark and its northern edge was excavated in 1997 (Hull 2001). The remainder fell within the development site where it was mapped by geophysical survey (Northamptonshire



Figure 1.3: Comparative phase plans (Phase 2, 3, 4 and 5/6)

Archaeology 2007). Trial trenches (Albion Archaeology 2018) were also dug to determine its precise location and depth below ground level, thereby informing proposals to preserve it beneath open space within the new development.

The trial trenching of the ditch produced pottery of Bronze Age to Roman date; a fragment of human skull from its upper fill was also radiocarbon dated to the late Bronze Age. The larger pottery assemblage from the 1997 excavation was dated to the late Bronze Age/early Iron Age (Jackson 2001, 82); this date range was complemented by two radiocarbon dates from animal bone from the ditch (Amber 2001). In summary, the ringwork ditch appears to have been dug (and partially silted up) during

the first quarter of the 1st millennium BC. Kidd considered the ringwork to be one of the earliest defended sites in Northamptonshire (2004, 49).

Many examples of late Bronze Age enclosures are known across southern England, e.g.: Castle Hill, Little Wittenham, Oxfordshire (Allen *et al.* 2010, 22–5); Queen Mary's Hospital, Carshalton, Surrey (Adkins and Needham 1985); Rams Hill, Berkshire Downs (Bradley and Ellison 1975); Taplow Court, Buckinghamshire (Allen *et al.* 2009); and Springfield Lyons, Essex (Brown and Medlycott 2013) (Fig. 1.4). In Essex and Kent the latter gives its name to a type site known as 'Springfield-style ringforts'. Similar enclosures occur on hilltops overlooking rivers in the Thames Valley (Lambrick

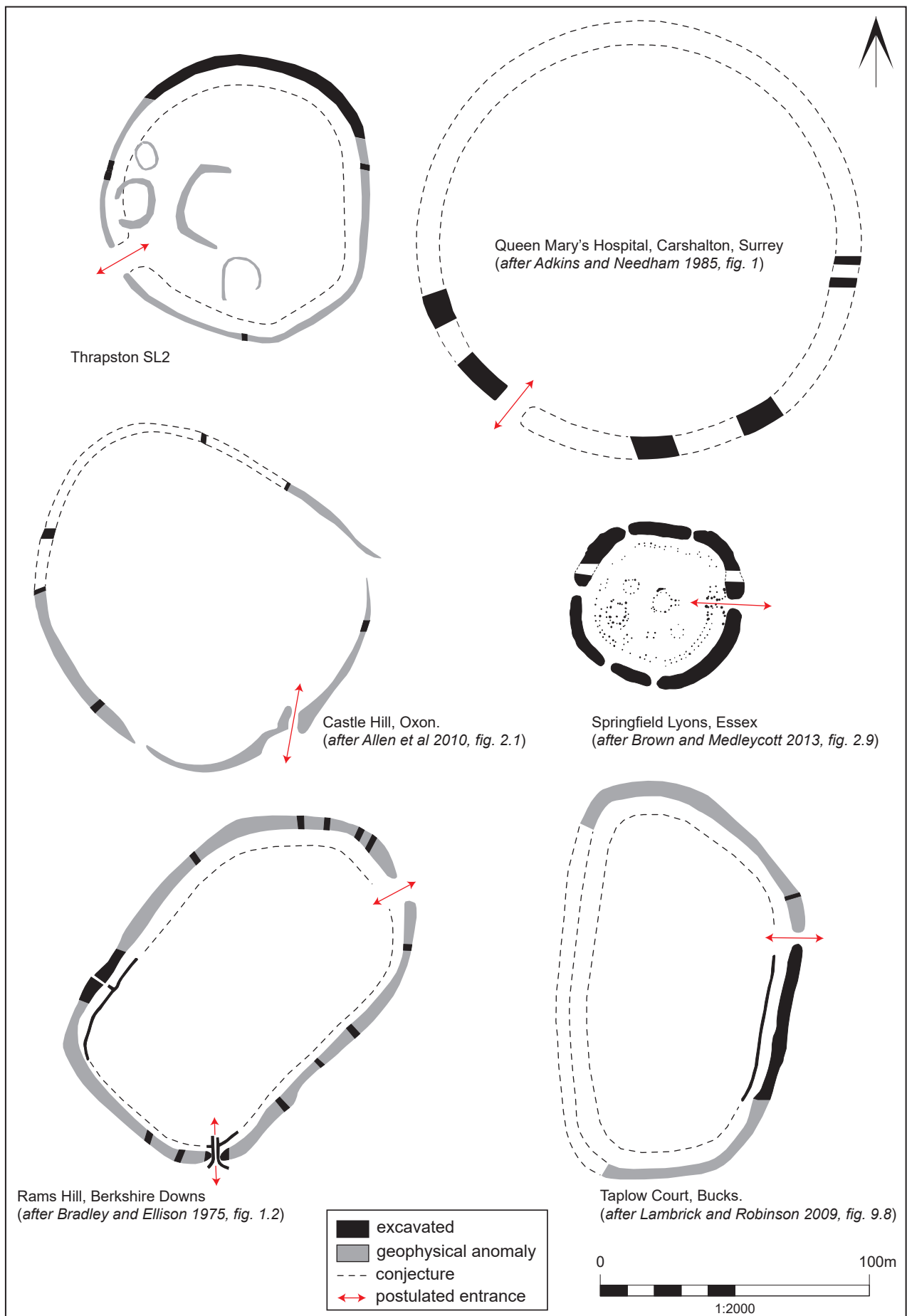


Figure 1.4: Comparative plans of ringworks at Thrapston, Queen Mary Hospital, Castle Hill, Springfield Lyons, Rams Hill and Taplow Court

2009, 344–8 and fig. 9.8). These enclosures have much in common, notably their substantial ditch, one or two entrances, and the presence of roundhouses within their interior. However, there is some variety in terms of their extent, the nature and size of the ditch and bank/rampart, the presence of entrance structures, and evidence for internal activity.

The Thrapston ringwork was slightly polygonal, similar to Springfield Lyons, while other enclosures tend to be sub-oval in shape. On the basis of a few excavated segments in the southern part of the ditch circuit, Adkins and Needham (1985, fig. 1) conjectured that the Queen Mary's Hospital ringwork was circular (Fig. 1.4); but others have suggested that it may have been D-shaped (Allen *et al.* 2009, fig.11.2). The Thrapston ringwork encloses an area of *c.* 0.75ha, which is comparable with Castle Hill, Little Wittenham (Allen *et al.* 2010, fig. 2.1, 22–5), but twice as big as Springfield Lyons, Mucking North and South Rings, Essex, and Mill Hill at Deal, Kent (Allen *et al.* 2010, 250). Such variations perhaps suggest that these enclosures should not be viewed as a single, uniform class of monument (Fig. 1.4; Table 1.1).

As revealed in the trial trenches, the Thrapston ringwork's ditch was 1.5–2.6m wide and more than 1.2m deep, with a V-shaped profile. The ditch in the 1997 excavation was 3.4–4.1m wide and 1.5–1.9m deep; it was also V-shaped in profile, with a steeper inner face (Hull 2001, 78). The only convincing entrance is to the south-west where the ditch's absence was confirmed by both geophysical survey and trial trenching. Other gaps in the geophysical anomaly do not always manifest as gaps in the cropmark, so it is possible that, like Castle Hill (Allen *et al.* 2010, 22–5), the Thrapston ringwork had just a single entrance. Although six causeways were recorded across the ditch at Springfield Lyons, only one was provided with a post-built gateway structure and is, therefore, considered to be the principal entrance (Brown and Medlycott 2013, 19).

No direct evidence for a bank/rampart was found in the trial trenches at Thrapston but, in the 1997 excavation, its existence was inferred from 'a band of relatively undisturbed naturally-deposited gravel' (Hull 2001, 78). This was *c.* 6–7m wide and located adjacent to the ditch. It coincided with a zone devoid of contemporary features, for which there was also some evidence in the trial trenches. 'A curvilinear feature immediately behind the location of the presumed bank was interpreted as a revetment gully, which would have served as a footing trench for timber uprights to retain the bank' (Hull 2001,

78). However, this feature was not parallel with the ditch, only a 12m length was present, and a corresponding feature was not found in the trial trenches; therefore, its interpretation is uncertain. Better examples of revetment gullies were found at Rams Hill and Taplow Court (Lambrick 2009, fig. 9.8 and Fig. 1.4). At Rams Hill the initial bank adjacent to the ditch is believed to have been replaced by a timber-framed/laced rampart (Lambrick 2009, 344). At Springfield Lyons an arrangement of post-holes indicates the presence of a timber-framed rampart/palisade but this was set back from the ditch (Brown and Medlycott 2013, 32–4).

Fourteen small pits within the interior of the Thrapston ringwork were considered to be contemporary with it (Hull 2001, fig. 3). In addition, geophysical anomalies in the ringwork's south-west quadrant indicate the presence of four curvilinear ditched enclosures, *c.* 10–25m in diameter, which probably indicate the location of roundhouses. The largest was located just off-centre and is, therefore, broadly comparable to the central of the four roundhouses at Springfield Lyons (Brown and Medlycott 2013, 34 and fig. 2.9). The evidence from Thrapston, Springfield Lyons and, probably, Rams Hill is suggestive of permanent settlement. This is unproven at many of the other enclosures, sometimes leading to the suggestion that these 'may have served as places for periodic gatherings for communities in the local area' (Allen *et al.* 2010, 252).

Kidd suggested that the so-called 'Springfield-style ringforts' were characteristic of high-status, domestic settlements in eastern England (2004, 49). The Thrapston ringwork is located on the valley side *c.* 30m above the level of the River Nene but it is not on a hill. Nonetheless, Hull interpreted it 'as a mini-hillfort or elite residence of a type particular to eastern England' (2001, 73) and concluded that it 'could have been associated with a local elite and/or have had a ritual function' (2001, 90). In this context the location of the enclosures on higher ground – in the case of Castle Hill, Rams Hill and Taplow Court on actual hills – may be significant especially as they had a complex sequence of defences, unlike Thrapston. They would have dominated the surrounding landscape of extensive field systems and settlements, although proving contemporaneity is difficult. In addition, the proximity of enclosures to rivers, as at Thrapston, is a common occurrence.

The scale of the ditch and associated bank/rampart at these enclosures certainly demonstrates that their builders had the power to command resources (labour and

Ringwork	Plan	Extent	Ditch width/depth	Bank/rampart	Entrance
Thrapston	Slightly polygonal	0.75ha	W: 1.5–4.1m D: 1.5–1.9m	Possibly 7m wide	One (SW)
Queen Mary's Hospital, Carshalton	Circular	1.5ha	W: 3.5m D: 2m	n/a	One possible (SW)
Castle Hill, Dorchester-upon-Thames	Sub-circular	0.8ha	W: 3.9–4.5m D: 2–2.5m	n/a	One (SE)
Springfield Lyons	Slightly polygonal	0.22ha	W: 3.1–6.8m D: 1.1–1.9m	Timber-framed and set back from ditch	One (E), but five other causeways
Rams Hill	Oval	1ha	W: 4.2–5.8m D: 1.8–1.9m	Initially dump rampart replaced with timber-framed/laced rampart	Two (NE and S)
Taplow Court	Oval	1.2ha	W: 5.3–6.3m D: 1.8–2.2m	Initially a simple palisade	One (E)

Table 1.1: Summary of Thrapston and other ringworks

timber) at a time when land-enclosure was relatively rare. Even without firm evidence for a gateway, such as that at Springfield Lyons (Brown and Medlycott 2013, 34), the size and nature of the Thrapston earthworks clearly indicate that visual impact was important to the inhabitants (Plate 1.4). However, other than a comparatively high incidence of pig bone from the 1997 excavation (Hamilton-Dyer 2001, 84) – as was also seen at Castle Hill (Allen *et al.* 2010, 88) – there are currently no other indicators of high status. By contrast, there was evidence for metalworking at both Springfield Lyons (Brown and Medlycott 2013, 159–60) and Castle Hill (Allen *et al.* 2010, 252), and high-status metalwork was recovered from Queen Mary's Hospital, Carshalton (Adkins and Needham 1985, 45–6). The enclosures at Rams Hill and Castle Hill were later subsumed within the ramparts of much larger hillforts; while those at Thrapston and Springfield Lyons were not. It is unclear whether this reflects on the status of the inhabitants or is simply because the former were situated on prominent hills.

Adjacent settlement SL1

Settlement SL1 was located c. 150m to the south-west of the Thrapston ringwork but due to extensive post-medieval quarrying it is unknown if it extended right up to the monument. It comprised an ephemeral enclosure system which contained evidence for dispersed settlement activity and cremation burials. The settlement extended over c. 1ha, with the distribution of features suggesting that it may have continued beyond the excavation area to the south and north.

The enclosures and trackway ditches were intermittent. This was partly the result of truncation but some had clearly been dug as segments as has been observed at other contemporary enclosure systems such as Raunds (Harding and Healy 2007, fig. 3.123). Evidence for dispersed activity comprised post-built structures,

isolated and clustered pits and postholes, 13 cremation burials, and one inhumation. Enclosure L2 contained a single four-post structure and six possible two-post structures. There was evidence for possible zonation within the enclosure, with post-built structures to the south, pits to the north-west, and cremation burials to the north. Outside the enclosure the most convincing post-built structures were a c. 3.5m-diameter roundhouse and (next to it) one side of a rectangular structure.

Only a small number of contemporary settlements are known in Northamptonshire, e.g. Gretton, Great Oakley and Weekley Hall Wood (Kidd 2004, 50). These are typically unenclosed, small in scale, and contain only a small number of post-built structures (Willis 2006, 99). However, middle-late Bronze Age settlements are increasingly being identified in the region, in part due to the increasing use of radiocarbon dating, e.g. Biddenham Loop, Beds. (Luke 2016, 142–8).

There were six cremation burials within enclosure L2, seven just outside it within cemetery L19, and one isolated inhumation. Five of the burials, including the inhumation, were radiocarbon-dated to the middle-late Bronze Age. This fits the pattern whereby cremation remained the main burial rite into the middle-late Bronze Age with smaller numbers of inhumations also taking place (Luke 2016, 170–5). In contrast to Thrapston, the contemporary cremation burials and inhumations at Biddenham Loop were located away from areas of settlement (Luke 2016, 182).

The features within settlement SL1 produced a small quantity of indeterminate late Bronze Age/early Iron Age pottery and eight middle-late Bronze Age radiocarbon dates (Table A3). This suggests that the settlement was broadly contemporary with the ringwork and ties in with the fact that the only identified entrance into the ringwork faced the settlement. However, in the 1997 excavation a short length of gully on a NW–SE alignment – similar

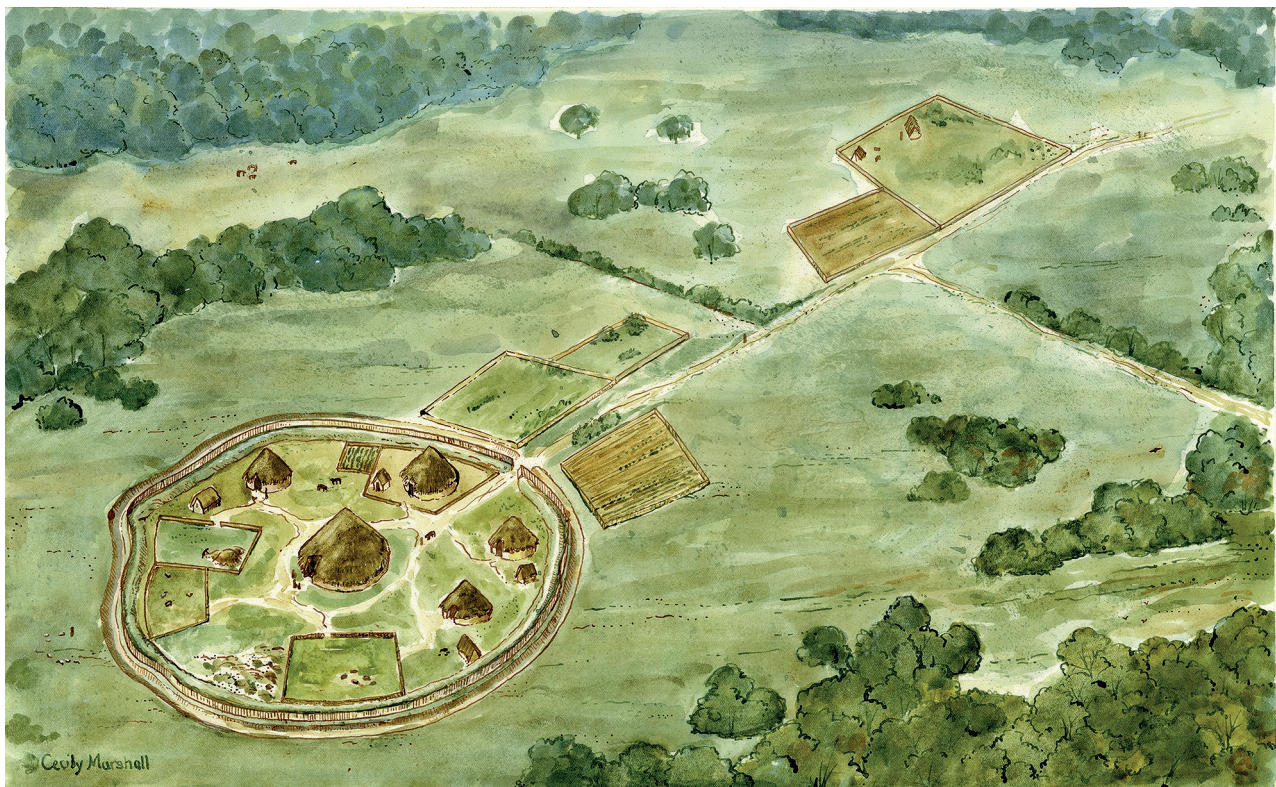


Plate 1.4: Reconstruction of the late Bronze Age/early Iron Age ringwork, looking south (by Cecily Marshall)

to that of the ditches of SL1 – was truncated by the ringwork ditch (Hull 2001, 78; Fig. 1.3). This may indicate that at least part of the settlement pre-dated the ringwork.

External settlements are also known at Springfield Lyons (Brown and Medlycott 2013, 159), Castle Hill (Lambrick 2009, 345–6) and Taplow Court (Lambrick 2009, 347), although at least at the former the immediate vicinity of the enclosure was kept clear (Brown and Medlycott 2013, 44). The only evidence for activity immediately outside the ditch at Thrapston was three pits found adjacent to the north side of the ringwork (Hull 2001, fig. 3). As is so often the case for this period, it is uncertain whether the remains outside the ringwork at Thrapston represent permanent settlement. It could be argued that the small finds assemblage derives from periodic gatherings that actually took place within the enclosure although, to date, there is no clear evidence for activities such as feasting.

Early/middle Iron Age and late Iron Age/early Roman settlements

These settlements occupied the same area as the middle–late Bronze Age settlement (Fig. 1.3).

Early/middle Iron Age settlement SL3 extended over c. 0.8ha. It comprised storage pits, water-pits and quarry pits, with some evidence for zonation in that the main cluster of storage pits L9 was situated north of the E–W band of quarry pits and water-pits. Similar clusters of storage pits and quarry pit are often found within Iron Age settlements, e.g. Bourton Way, Wellingborough (Luke and Barker 2020, fig. 2.3).

The late Iron Age/early Roman settlement SL5 extended over c. 1.1ha. It comprised an enclosure system with integral trackway, similar to those at contemporary settlements such as Bourton Way, Wellingborough (Luke and Barker 2020, fig. 2.3) and Station Road, Higham Ferrers (Luke and Barker 2020, fig. 4.2). However,

unusually, the enclosures at Thrapston only contained a single water-pit and three clusters of quarry pits.

The absence of any roundhouses or post-built structures suggests that in both cases the settlement core lay beyond the excavation area. The pottery assemblages (c. 3.6kg from SL3 and c. 4.3kg from SL5) are larger than those recovered from some contemporary settlements where there is evidence for roundhouses and enclosures, e.g. Site 3 on the Rushden and Higham Ferrers Bypass (Timby 2004, 76). Limited evidence is known for contemporary activity within and around the former ringwork, although a spread of late Iron Age pits and other features were found in 1997 (Hull 2001, fig. 3).

Early Anglo-Saxon settlement

Extent and character

Some 1.1ha of settlement SL7/8/9 was revealed within the excavation area although its full extent was probably slightly larger (Fig. 1.5). The settlement core SL7 comprised a concentration of at least nine rectangular ground-level buildings and at least 16 other smaller possible buildings (Plate 1.5). Only three possible SFBs were identified and these were sited, presumably deliberately, along the south-east fringes of the settlement core. Activity focus SL8 comprised two adjacent ground-level buildings and a pit, which were located c. 30m to the south of SL7.

The ground-level buildings at Thrapston appeared to respect the alignment of Phase 4 enclosure ditches, which were presumably still visible in the landscape, but there is no evidence to suggest that the boundaries were revived or maintained. A similar phenomenon has been observed at other settlements, e.g. Higham Ferrers (Hardy *et al.* 2007, 186) and West of Bedford (Luke 2016, 265). At Thrapston one of the SFBs was dug into the late Iron Age/early Roman trackway, suggesting that this was no longer in use.



Plate 1.5: Reconstruction of the early Anglo-Saxon settlement, looking south-east (by Cecily Marshall)

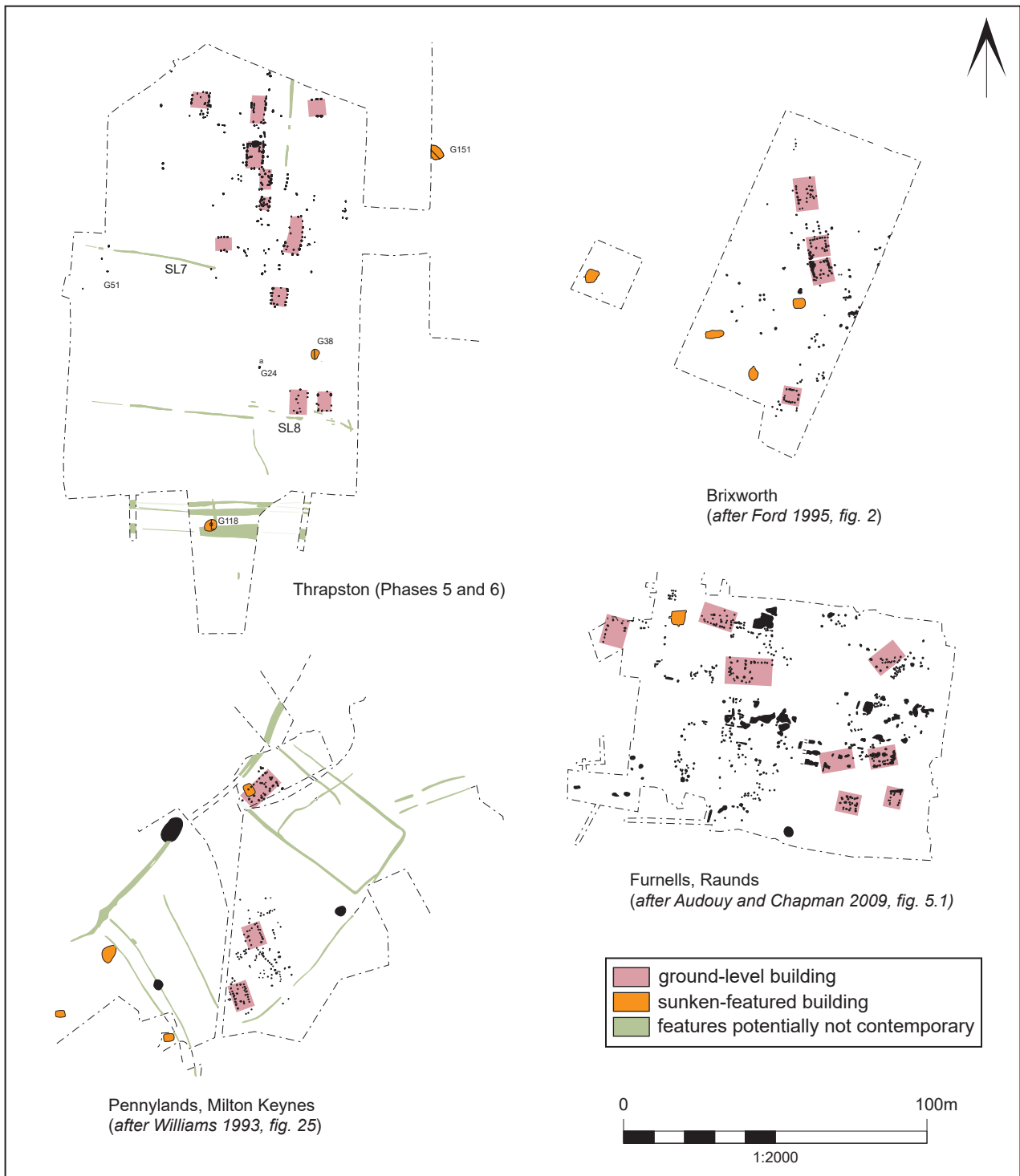


Figure 1.5: Comparative plans of Anglo-Saxon settlements at Thrapston, Brixworth, Pennylands and Furnells

Blair has discussed the evidence for grid-planning in Anglo-Saxon settlements – both in general and specifically in the East Midlands (2013; 2018, 154–6; Blair *et al.* 2020). Many of the building plans at Thrapston are partial and it is not certain that they were all in use at the same time. Nevertheless, the settlement's overall layout does exhibit a degree of regularity, as can be seen when a grid based on the short perch (*c.* 4.6m) is placed over it (Fig. 1.6). The alignment of the grid also suggests that the late Iron Age/early Roman (Phase 4) ditched enclosures had an influence on the setting out of the Anglo-Saxon settlement. The possibility that some of

the ditches might be contemporary with the settlement was considered, but none of them produced Anglo-Saxon pottery.

At Polebrook, *c.* 11km north-east of Thrapston, Blair described another 7th-century settlement comprised of buildings and linear ditches that conformed to a grid of short perches (2013, 27–30; 2020, 159, fig. 6.2). He considered the major minster at Oundle (3km to the north-west) to be the agency behind this grid-planning and, in particular, its abbot, Wilfrid, who was an early and enthusiastic adopter of *Romanitas*, including its technological aspects such as precision surveying.

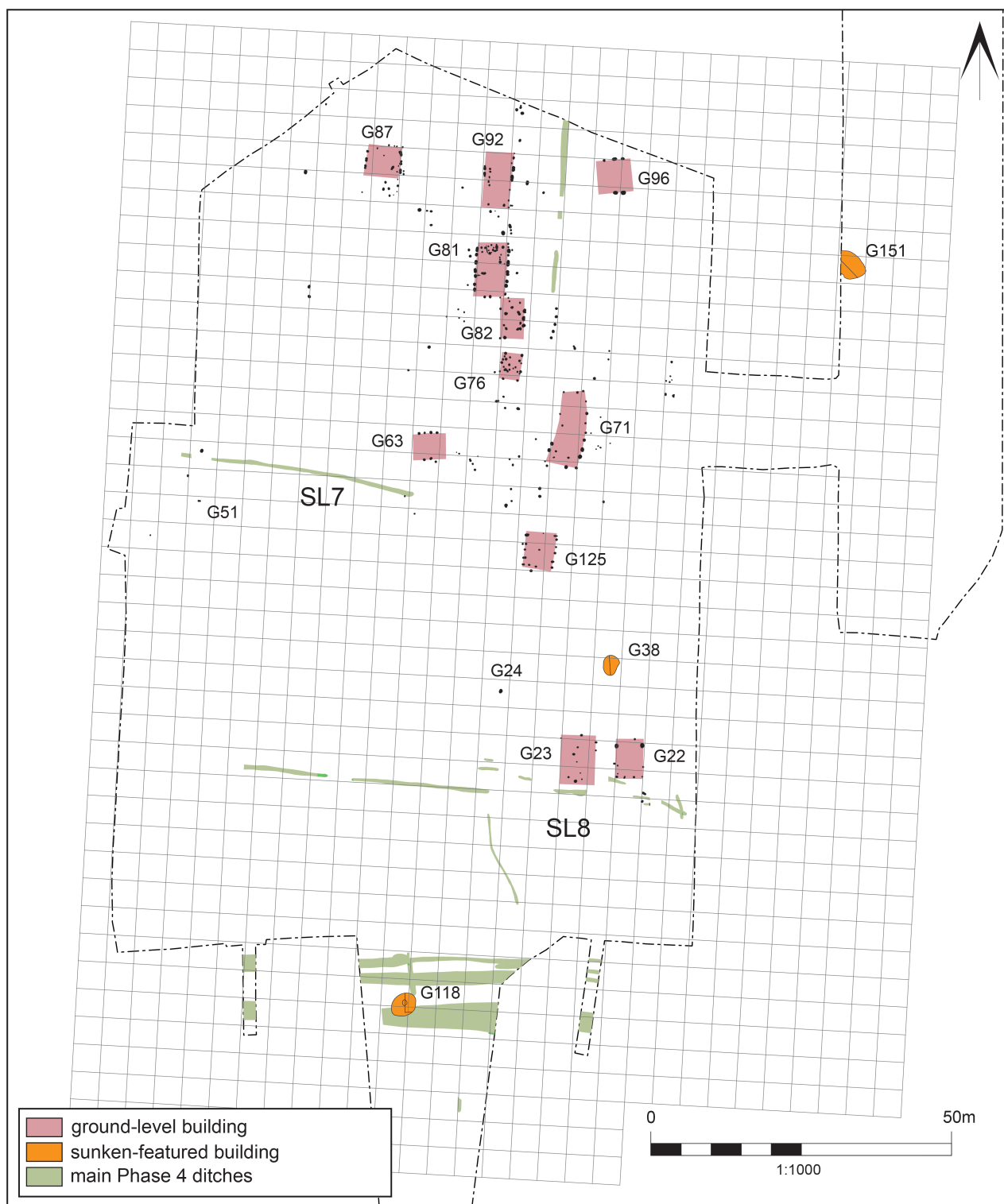


Figure 1.6: The Anglo-Saxon settlement at Thrapston with a grid based on the short perch (4.6m)

The contemporaneous settlements at Thrapston and Polebrook were linked both by the River Nene and a former Roman road and it seems probable that Thrapston was another of Oundle Minster's dependent settlements. Such minsters often assumed the names and central-place functions of the older territorial units within which they were founded (Blair 2018, 133). Oundle was one of a number of Fen-edge territories recorded either by Bede or in the *Tribal Hidage*, a late 7th-century Mercian tribute list (Stafford 1985, 30). The bounds of its territory were probably preserved in the Eight Hundreds of Oundle, a long-lived administrative

unit that went on to form the north-east corner of the later county – Thrapston parish lay within one of those hundreds (Navisford).

Dating

The available evidence suggests that there was a hiatus between the Roman and Anglo-Saxon settlements at Thrapston – at least within the excavation area. The only evidence for late Roman activity was the recovery of five late 3rd- and early 4th-century coins, one of which is perforated, suggesting re-use as a pendant during the Anglo-Saxon period.

The settlement is dated to the early Anglo-Saxon period by a small pottery assemblage (c. 0.5kg), from which middle Anglo-Saxon types, such as Maxey or Ipswich wares, are absent. A ceramic loom weight (RA25) and a furnace bottom or slag cake of ferrous smelting slag also support the early Anglo-Saxon date. The small finds assemblage is typical of settlements with few SFBs as these features are known to contain the majority of the finds from early Anglo-Saxon sites (Hamerow 2012, 53). Four early Anglo-Saxon radiocarbon determinations were obtained from three postholes associated with the ground-level buildings and one small pit. However, the dating evidence is insufficient to prove that the ground-level buildings are contemporary with the SFBs and it is known from other settlements that this is not always the case, e.g. Yarnton, Oxon (Bayliss and Hey 2004, 263).

Ground-level buildings

At least partial ground plans of 11 ground-level buildings were identified: nine in SL7, and two in SL8. These were rectangular or square, although the latter may simply be larger buildings that have only partially survived. All except G63 and G96 were aligned N–S. Buildings aligned E–W appear to be more the norm in the early Anglo-Saxon period (Hamerow 2012, 22), although N–S aligned buildings were identified at Brixworth, Northants. (Ford 1995, fig. 2). A further 16 clusters and arrays of postholes (assigned to L30) may indicate the location of other (mainly smaller) buildings or structures, not all of which were aligned N–S. All the buildings were constructed with, presumably load-bearing, earth-fast posts set into individual postholes, which is more typical of the early Anglo-Saxon period (Hamerow 2012, 22).

Where a fairly complete ground plan could be determined, the buildings had quite variable dimensions: 8.5–12.6m long and 4.3–5.4m wide. These are larger than those found at Brixworth, Northants. (Ford 1995, 81–5 and figs 2–4), but are within the recorded ranges for contemporary buildings (Marshall 1991, 37–8; Hamerow 2012, 22–4). Hamerow has also discussed the various attempts to identify a system of standard lengths used in Anglo-Saxon buildings, including ones based on multiples of 3.5m and 5m (2012, 25). While there is evidence that some of the Thrapston buildings broadly fit these measurements, there are plenty of others that do not (Table 2.4). Some of the ground-level buildings at Thrapston were twice as long as they were wide (e.g. G71, G81), fitting the two-square module (Hamerow 2012, 22). Finally, in terms of dimensions there appears to be more variation in width at Thrapston than seen elsewhere (Hey 2004, 64).

Only four postholes, all within building G76, contained evidence for the actual posts in the form of postpipes. These suggest that the posts were circular, 0.2–0.26 in diameter, and vertical. The absence of evidence for more postpipes may be because loose, gravelly fills are less likely to retain the shape of a decaying post or, and probably more likely, because the posts were removed for reuse elsewhere. The postholes themselves ranged in diameter from 0.1–0.9m and were 0.05–0.6m deep, with the majority in the middle of these ranges. Within the same wall line, the depth of the postholes was variable, suggesting that they were dug to accommodate the different lengths of the available posts.

Each wall of the majority of the buildings at Thrapston appeared to comprise a single row of posts. There were

regularly spaced double postholes in the walls of buildings G81, G87 and G92. Although some appeared to be slightly intercutting, this is likely to be a function of their excavation/recording – it does not mean that they could not have held contemporary posts. Their frequency suggests that they were a deliberate choice on the part of the builders and not, for example, associated with doorways or the result of repair/replacement. There was no consistency in the dimensions of the two postholes in the double-posthole arrangements, perhaps suggesting that they were not designed to stabilise a wall-plate as suggested at Mucking (Hamerow 1993, 8). Although not universal, many of the postholes (including the double postholes) appeared to be paired with postholes on the opposite wall, suggesting that the posts supported a tie beam or roof truss.

The end walls of the buildings, if evidenced at all, were often poorly defined. This is a common phenomenon – ‘end walls are (generally) less substantial than the side walls; the weight of the roof was overwhelmingly taken on the side walls’ (Gardiner 2012, 242). It is assumed that the doorways were located in the centre of the side walls, although no convincing evidence for their exact locations was found. Building G81 featured a number of external postholes, within 1.5m of its walls, as did Brixworth Structure 2 (Ford 1995, fig. 3). They were also seen at Pennylands, Milton Keynes (Williams 1993, 82) where it was suggested that they represented buttresses or raking timbers; however, the evidence at Thrapston is insufficient to support such an interpretation.

Buildings G81, G87 and G92 contained internal postholes, suggesting that they were partitioned in some way. The evidence, as at Brixworth (Ford 1995, fig. 3), is insufficient to indicate the nature and dimensions of these sub-divisions with any certainty. One end of building G81 contained a silty layer that may have been remnants of floor make-up; it was associated with a cluster of postholes.

There are numerous parallels for the buildings at Thrapston with both single and double post rows, e.g. Brixworth, Northants. (Ford 1995, 81–5 and figs 2–4), West Stow, Suffolk (West 1985, 111), and Mucking, Essex (Hamerow 1993, 8 and figs 54–6). However, the Thrapston buildings were variable in overall size and lacked obvious evidence for central opposing doorways. Similar buildings are sometimes referred to as ‘halls’, e.g. Pennylands (Williams 1993, 81–2), the use of the term indicating a large timber-framed building but not necessarily one of high-status (Hey 2004, 65). The absence of structural detail from the Thrapston buildings and the paucity of the finds recovered from them preclude any substantive discussion of function or their occupants status. The larger buildings are likely to have been dwellings; while the smaller ones may have served non-domestic functions such as barns, stores, craft workshops or, quite possibly, a combination thereof.

Possible SFBs

The three possible SFBs were 3.3–5.25m long and 2.4–3.8m wide (i.e. within the ranges identified by Tipper; 2004, 64), similar to those found at Brixworth (Ford 1995, 85–8). The Thrapston examples had fairly flat bases – two were less than 0.25m deep; the other was deeper at c. 0.9m. SFBs are known to exhibit great variation in depth (Tipper 2004, 65) but are usually less than 0.6m deep. However, one of the 28 SFBs at Biddenham

Loop was 0.8m deep (Luke 2016, table 5.6) and a handful of those at Mucking were between 0.8m and 1m deep (Hamerow 1993, 11 and fig. 8).

No postholes were found within or adjacent to the sunken area of the Thrapston buildings – their presence is one of the defining characteristics of SFBs (Tipper 2004, 74; Blair 2018, 25) – and their absence was one of the reasons why the features were interpreted as pits during fieldwork. However, SFBs without postholes are fairly common, e.g. two at Brixworth (Ford 1995, 85–8), three at Higham Ferrers (Hardy *et al.* 2007, figs 3.10, 3.11, 3.14), and 10% of the SFBs at West Stow, Suffolk (West 1985, 14–5). The overall dimensions, fairly flat base, and the presence of early Anglo-Saxon pottery do, however, support the interpretation of the three Thrapston features as SFBs.

It was once argued that SFBs were specifically used as craft workshops, e.g. weaving sheds. This was largely because of their small size, the presence of loom weights, and the idea that the sunken area would create a more humid atmosphere beneficial to textile manufacture (Hardy *et al.* 2007, 187). However, experiments and more recent research indicate that weaving could have just as easily been undertaken in ‘halls’ and the fills within SFBs were most likely deposited after the building had gone out of use (Hardy *et al.* 2007, 187). The nature of the evidence from Thrapston cannot assist in this debate, other than to note that their peripheral location may suggest that they are ancillary structures to the ground-level buildings – assuming that they were in use at the same time.

Other features

The only other feature which could be firmly dated to this period was small pit G24, which produced an early Anglo-Saxon radiocarbon date. It contained a furnace bottom or slag cake of ferrous smelting slag of a type known in Britain from the Anglo-Saxon period onwards. The absence of evidence of *in-situ* burning indicates that the feature was not a hearth/furnace.

Summary

Northamptonshire has a number of early Anglo-Saxon settlements that feature both ground-level buildings and SFBs. Several of these were found in excavations around Raunds, e.g. Burystead and Langham Road (small number of ground-level buildings and SFBs), and Furnells (loose groupings of at least eight ground-level buildings but only one definite SFB; Audouy and Chapman 2009, 64 and fig. 5.1). The excavation area at Brixworth was limited but four ground-level buildings

and four SFBs were identified (Ford 1995). A number of ground-level buildings and SFBs were found at Dando Close, Wollaston, although these were a mix of both early–middle and late Anglo-Saxon date (Heritage Network 2003, fig. 6). There are also sites in the county, such as Sites 1, 4 and 9 at Higham Ferrers, where SFBs are associated with scatters of postholes within which no obvious building plans are apparent (Hardy *et al.* 2007).

Away from Northamptonshire, settlements are known at Pennylands, Milton Keynes where, in the early–middle Anglo-Saxon phase, there were three ground-level buildings and three SFBs (Williams 1993, 93). There are also the more extensive settlements at West Stow, Suffolk, where at least 14 ground-level buildings and 69 SFBs were found (West 1985) and at Mucking, Essex, where 53 ground-level buildings and c. 200 SFBs were recorded (Hamerow 1993).

The low ratio of SFBs to ground-level buildings at Thrapston is perhaps a little unusual compared to other contemporary settlements where SFBs are usually more frequent, e.g. West Stow and Mucking. However, in Northamptonshire, at Brixworth there were four SFBs and four ground-level buildings (Ford 1995, 105 and fig. 2); at Furnells Raunds there were eight ground-level buildings to a single SFB (Audouy and Chapman 2009, 64 and fig. 5.1); and at Higham Ferrers there were four SFBs but no definite ground-level buildings (Hardy *et al.* 2007, 16 and fig. 3.3). It seems possible that the ratios observed at Thrapston may actually be more representative of the overall picture, given that the complete truncation of postholes is more likely than the complete truncation of SFBs. Of course, this all assumes that the ground-level buildings and SFBs were in use at the same time.

Without detailed dating evidence it is difficult to determine any common trends. However, generally speaking, there is evidence for the spatial separation of SFBs in relation to ground-level buildings at Thrapston. This was also the case at Brixworth, Furnells, and Pennylands (Fig. 1.5), although on some settlements they appear to cluster around ground-level buildings as at West Stow (West 1985, fig. 7).

Dating evidence is insufficient to determine whether all the buildings were in use at the same time, although it is presumed that this was not the case. The remains may represent one family group moving around the same area rather than several different family groups. Either scenario could be used to explain the presence of the two rectangular buildings SL8 within a discrete area, c. 30m to the south of SL7.

Chapter 2

Site sequence

2.1 PRE-BRONZE AGE (PHASE 1)

The earliest evidence of human activity within the excavation area comprised two Mesolithic to early Neolithic flint blade fragments and part of a later Neolithic flint knife. However, all were residual finds in later features.

2.2 MIDDLE BRONZE AGE/EARLY IRON AGE (PHASE 2)

Overview

The earliest firm evidence for settlement was broadly dated to the middle Bronze Age/early Iron Age. It comprised settlement SL1 and, c. 150m to the north-east,

ringwork SL2 (Fig. 2.1). Although the intervening ground fell within the excavation area, it was extensively quarried in the post-medieval period and, therefore, it is unknown if the settlement extended right up to the ringwork.

Assignment of features to Phase 2 was based on the presence of a small quantity of indeterminate Bronze Age and Iron Age pottery, and middle/late Bronze Age and early Iron Age radiocarbon dates (Table A3). The pottery fabric types are comparable with those recovered from the previous investigation of the ringwork when it was concluded that it had been created in the late Bronze Age (Jackson 2001, 73 and 79).

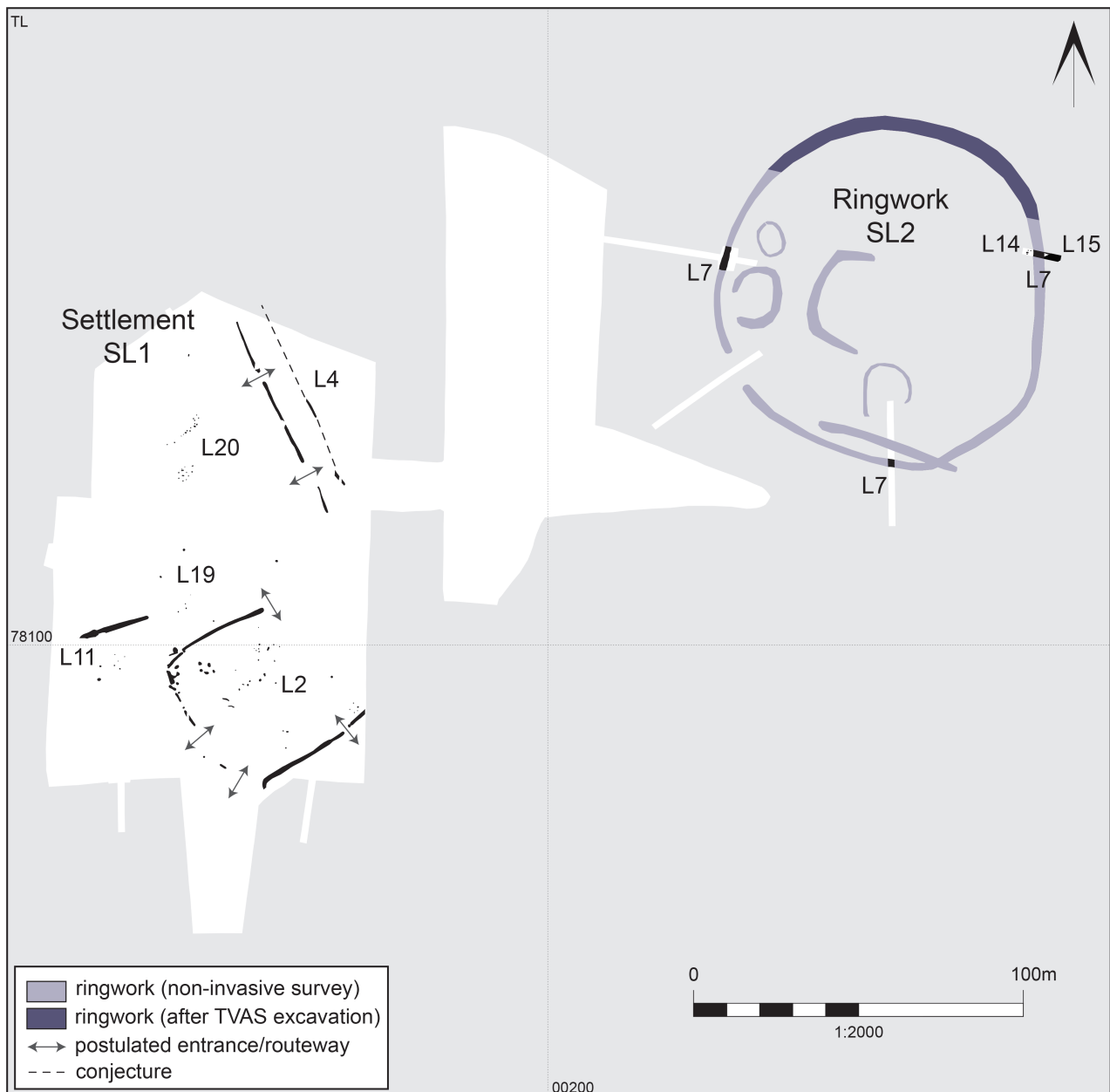


Figure 2.1: Overview plan of middle Bronze Age/early Iron Age (Phase 2)

Settlement SL1

Settlement SL1 comprised enclosure L2, trackway L4, activity foci L11 and L20, and cremation cemetery L19. Cremation burials were also present within enclosure L2. The settlement extended over c. 1ha, with the distribution of features suggesting that it may have continued beyond the excavation area to the south and north.

Settlement SL1 yielded 123 pottery sherds (c. 1kg), most of which derived from enclosure L2. In addition, ditch G17 (L11) produced a bone point or gouge (RA31), similar to ones found on other Iron Age sites and probably associated with weaving. One of the postholes of

two-post structure G21 contained a triangular loom weight (RA30) of possible Iron Age date.

Enclosure L2

Rectangular enclosure L2 measured c. 45m by at least 50m – its east side was not identified (Fig. 2.2). Its other sides were defined by continuous ditches (G7, G15 and G16) except to the west and north-west where there were six shorter ditch segments (G8–G11, G13 and G14), 2–7m long with clear terminals. The ditches were 0.6–1.4m wide and less than 0.5m deep; there was some evidence for redigging (Fig. 2.3 sections b, e and j).

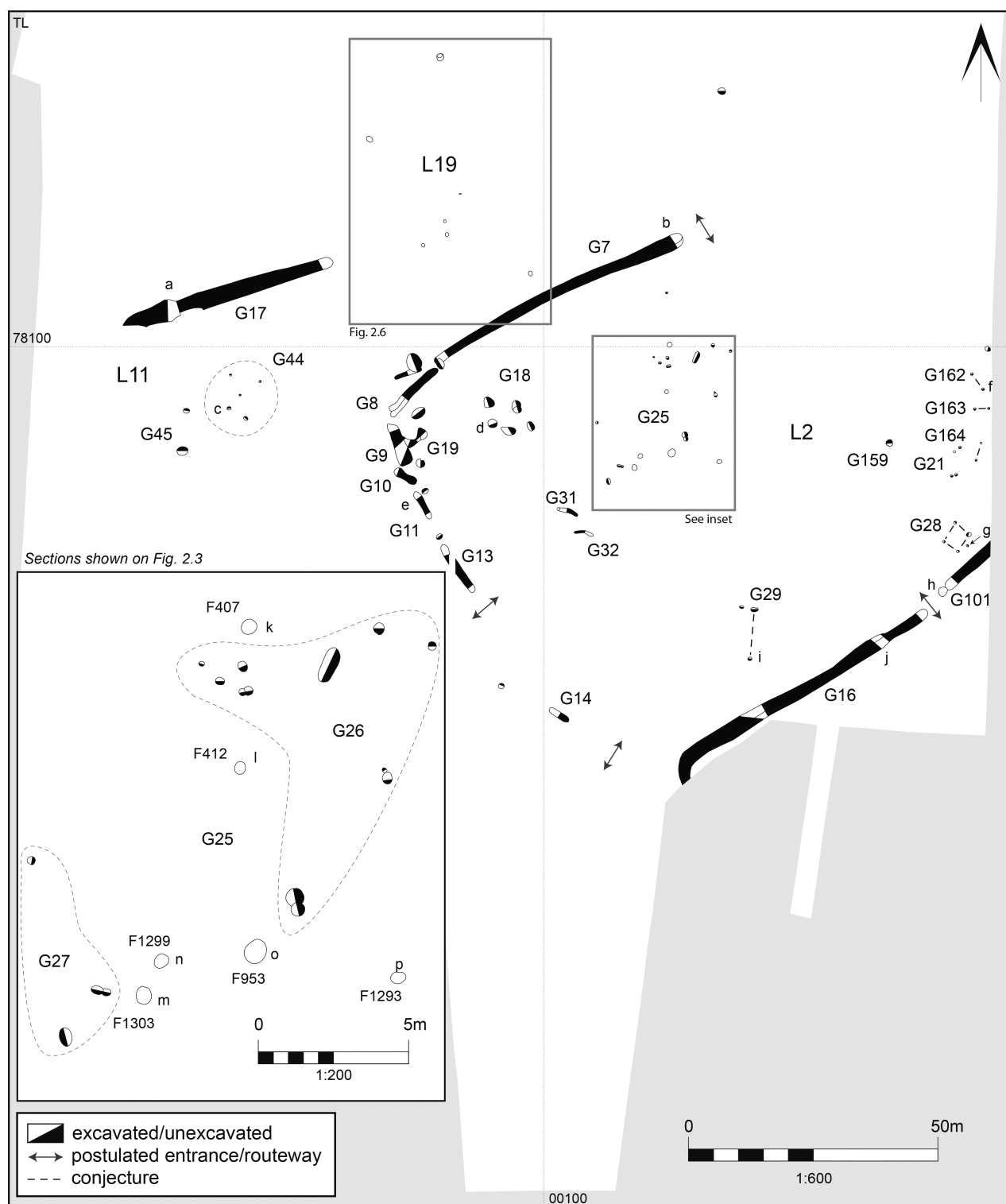


Figure 2.2: Southern part of settlement SL1

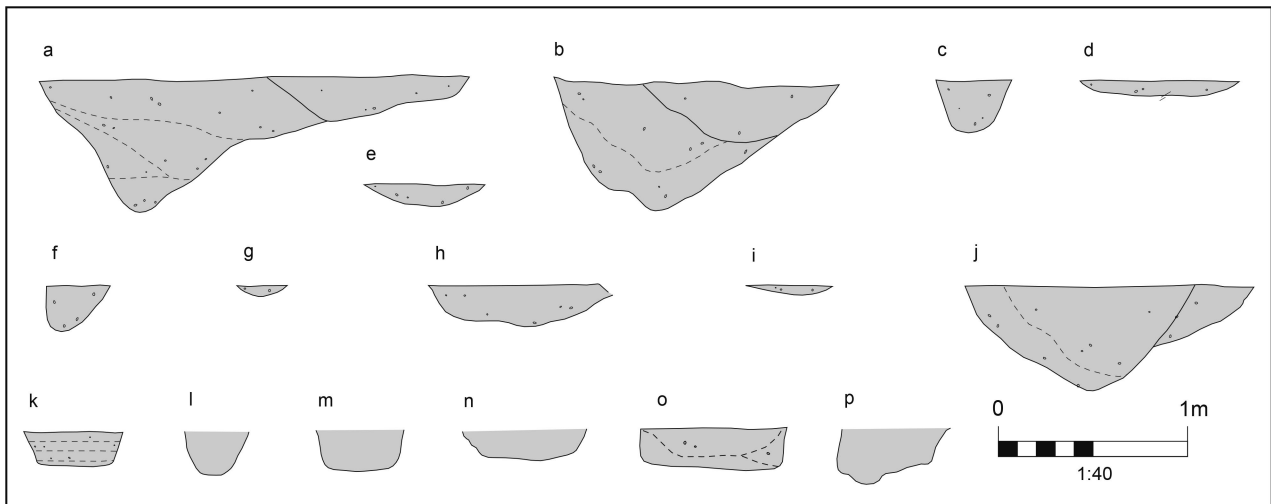


Figure 2.3: Selected sections from Fig. 2.2

A variety of possible entrances were identified, although the segmented and incomplete nature of the enclosure's ditches makes some uncertain. The most convincing was a c. 3m-wide gap in ditches G15/16 on the south-east side. A large pit G101 (Fig. 2.3 section h) on the east side of this causeway is probably associated with an entrance structure. Other possible entrances are indicated by ditch terminals and wide gaps to the south-west and north-east.

Evidence for internal activity comprised post-built structures, both isolated and clustered pits and postholes, and six dispersed cremation burials. There were also two short gullies (G31 and G32), c. 2m long and c. 0.1m deep. Most of the features were located in the north half of the enclosure, with only the post-built structures in the south half.

Post-built structures

Within a spread of postholes it was possible to identify a single four-post structure G28 and six possible two-post structures G21 (× 2), G29, G162–G164 (Table 2.1). The postholes of the latter were 0.4–1.9m apart,

c. 0.25–0.65m in diameter and under 0.4m deep (Fig. 2.3 sections f, g and i).

Pits

Pit clusters G18 and G19 were located in the north-west part of the enclosure. The six pits in G18 covered an area of c. 3.5 × 6m. They were oval, 0.6–1.1m in diameter and less than 0.3m deep (Fig. 2.3 section d). The pits of G19 were similar but were located adjacent to the enclosure ditch, with one outside it.

Little can be said about the other small pits, although G159 contained charred plant remains and charcoal. It was c. 0.7m in diameter and c. 0.15m deep, with no evidence for *in-situ* burning.

Cremation cemetery G25

Six cremation burials (Table 2.2) were located within a c. 12 × 8m area. Burial F953 may have been the first, forming a focus for the other five burials. The graves were 0.3–0.8m in diameter and up to 0.3m deep (Fig. 2.3 sections k–p). Cremated bone from F953 and F1293 was radiocarbon-dated to the middle Bronze Age (Table A3).

G	L	Type	Evidence	Alignment	Extent/ distance apart (m)	Posthole diam. (m)	Posthole depth (m)	Finds (kg) and radiocarbon dating
21	2	2 × 2-post	Postholes (2 pairs of 2)	NE–SW	0.4–0.7	0.3	0.15	LBA/EIA pottery (29 sherds, 203g) Triangular loom weight RA30
28	2	4-post	Postholes (4 at corners & 1 off-set)	NW–SE	2.1 × 1.8	0.25–0.4	0.05–0.2	261g burnt stone
29	2	?2-post	Postholes (2 adjacent (1 had been redug) & 1 to SW)	NW–SE	1.2	0.25–0.55	0.05–0.1	–
44	11	Cluster	Postholes (5)	n/a	4	0.2–0.4	0.05–0.2	–
65	20	Circular	Postholes (10 including 2 central)	n/a	3.1	0.3–0.45	0.1–0.25	–
68	20	Alignment	Postholes (16)	NE–SW	13	0.15–0.65	0.1–0.35	1g animal bone 1497–1394 cal. BC (SUERC– 84097; 3154±24 BP)
162	2	?2-post	Postholes (2)	NW–SE	1.9	0.25–0.3	0.1–0.25	–
163	2	2-post	Postholes (2)	E–W	1.4	0.25–0.3	0.05–0.3	–
164	2	2-post	Postholes (2)	NE–SW	1.8	0.25–0.3	0.15–0.35	–

All weights have been rounded up to the nearest 0.01kg

Table 2.1: Middle Bronze Age/early Iron Age (Phase 2) post-built structures

L	G	Feature nb	Cremated human bone (g)	Age	Sex	Radiocarbon date
		F407	204.6	11–16 years	–	–
		F412	636.2	Adult	Male	–
2	25	F953	717.8	Adult	–	1291–1056 cal. BC (SUERC–78767; 2975±35 BP)
		F1293	1015.7	Adult	?Male	1217–1011 cal. BC (SUERC–78768; 2919±35 BP)
		F1299	*	–	–	–
		F1303	17.9	–	–	–
		F930	*	–	–	–
	48	F921	*	Adult	–	–
		F978	*	–	–	–
19		F1803 eval	310	Adult	–	–
		F524	350.3	Adult	–	999–832 cal. BC (SUERC–78772; 2764±35 BP)
	49	F1044	19.2	–	–	–
		F1042/1038	0.6	Adult	–	1131–931 cal. BC (SUERC–78773; 2875±35 BP)

* sample content partially lost in vehicle accident

Table 2.2: Middle Bronze Age/early Iron Age (Phase 2) cremation burials

Posthole cluster near cremation cemetery

G26 comprised a cluster of ten postholes and one oval pit on the north-east side of the cremation cemetery. The postholes were *c.* 0.25m in diameter and *c.* 0.2m deep; the pit was larger at *c.* 1.2 × 5m but was also *c.* 0.2m deep. Four similar-sized postholes (G27) were located on the west side of the cremation cemetery.

Trackway L4

Two parallel ditch lengths, *c.* 8.5m apart, defined a NW–SE aligned trackway/routeway at least 70m long (Fig. 2.4). It was perpendicular to and north-east of enclosure L2. Its west side comprised four ditch lengths, *c.* 10–30m long, separated by gaps of *c.* 3–9m. The ditch to the east was probably also segmented but it was heavily truncated, making interpretation difficult. No clear recuts were visible, although the asymmetrical profile may indicate that the trackway ditches had been redug (Fig. 2.4 sections b and c).

Activity foci L11 and L20

Activity focus L11 lay to the west of enclosure L2 and activity focus L20 to the north (Fig. 2.1). Both contained clusters of postholes and L11 featured a *c.* 20m-long ditch (G17) on a slightly different alignment to the north side of enclosure L2 (Fig. 2.2). The ditch had clearly been recut at its west end (Fig. 2.3 section a).

Post-built structures

Four arrays of postholes may represent post-built structures (Table 2.1). G65 (L20) comprised a *c.* 3.5m-diameter circle of eight small postholes enclosing a pair of central postholes (Fig. 2.5; Plate 2.1). A small number of additional postholes and small pits G67 were located to the north-east of structure G65. The 16 postholes of G68 (L20) formed a *c.* 13m-long linear array (Fig. 2.5), possibly defining one side of a rectangular structure or a fence line. The five postholes of G44 (L11) formed a *c.* 4m-diameter cluster, comparable in extent to G65 but less convincing as a structure (Fig. 2.2). All the postholes were under 0.4m deep (Figs 2.3 section c and 2.5 sections a–f).



Plate 2.1: Circular structure G65 (L20) during cleaning, looking south

Inhumation F1141 (G37)

An isolated inhumation was located *c.* 20m north of the post-built structure G68 (L20). The N–S aligned grave measured *c.* 0.75 × 0.4 × 0.15m with an undulating base (Fig. 2.4 section a). The skeleton was well-preserved and largely complete (Plate 2.2). It comprised the flexed remains of an infant, who had died aged 2–3 years. No grave goods were present but one of the bones was



Plate 2.2: Inhumation F1141 (L20), looking west. Scale 0.4m

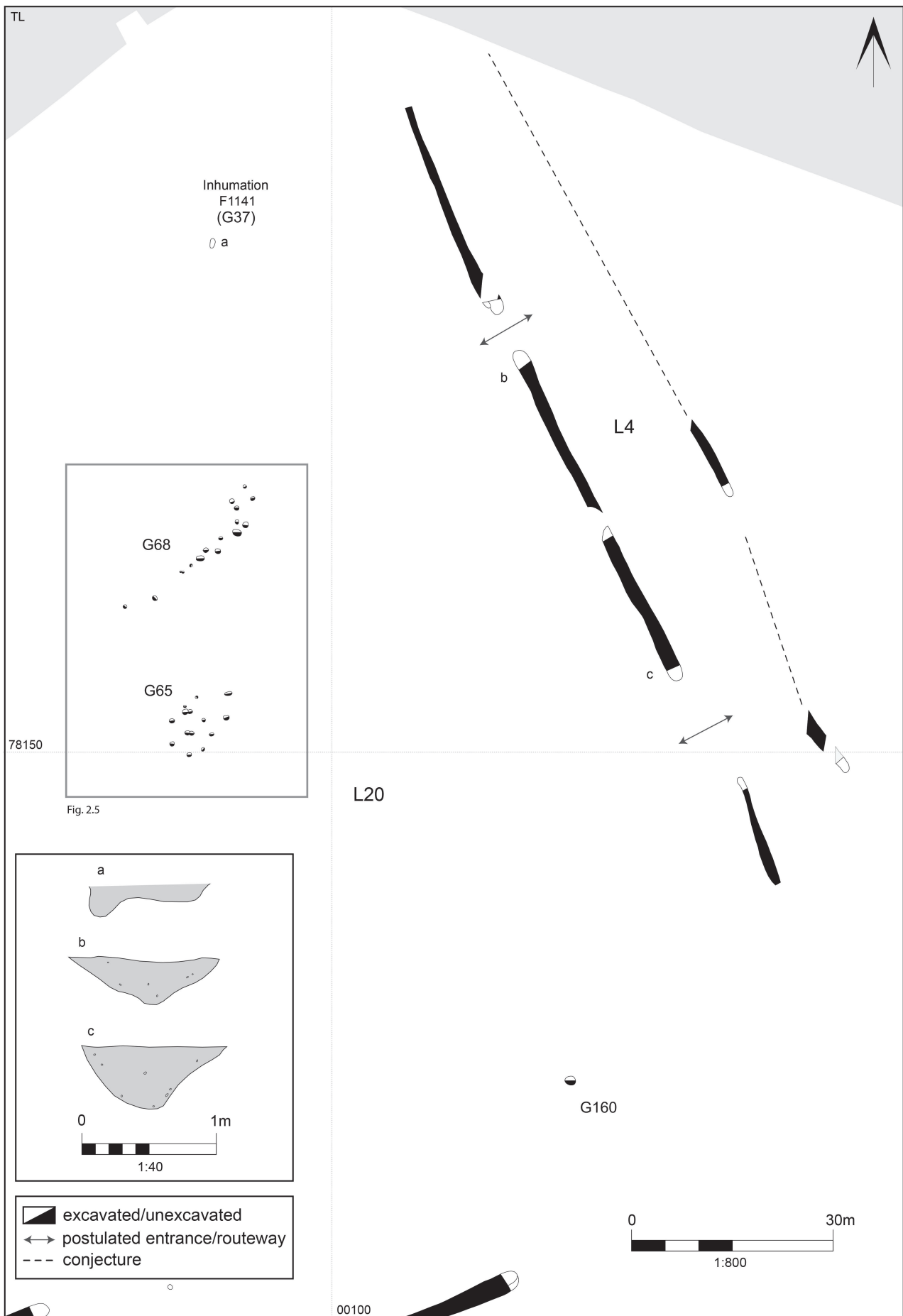


Figure 2.4: Northern part of settlement SL1

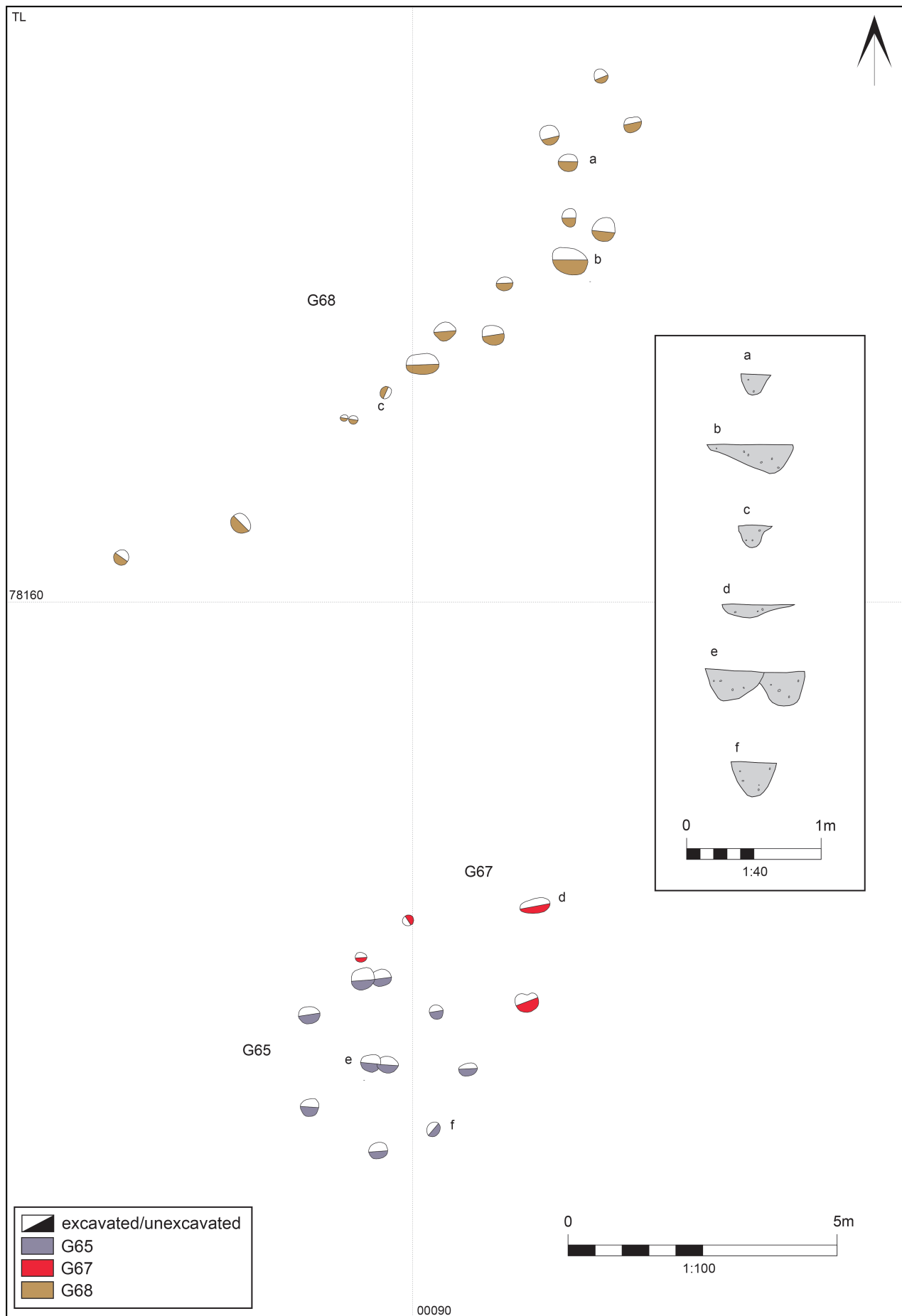


Figure 2.5: Post-built structures L20

radiocarbon-dated to the late Bronze Age/early Iron Age (Table A3).

Cremation cemetery L19

To the north of enclosure L2, a c. 22 × 10m area contained seven unurned cremation burials (Fig. 2.6), including F1803 identified within a trial trench (Northamptonshire Archaeology 2007, 15). Four graves (F930, F921, F978 and F1803) were in a cluster G48; the other three graves G49 were outliers.

The graves were 0.3–0.8m in diameter and less than c. 0.4m deep (Fig. 2.6 sections a–f; Table 2.2). No grave goods were present. Grave F1042/1038 to the north

appeared to have been partially dug into an earlier feature (Fig. 2.6 sections a). Cremated bone from F524 and F1042/1038 was radiocarbon-dated to the middle–late Bronze Age (Table A3).

Ringwork SL2

This c. 100m-diameter, ditched enclosure was originally identified as a cropmark on aerial photographs. Its northern edge was excavated in 1997 (Hull 2001). The majority of the ringwork was preserved *in-situ* within the development where it was subject to geophysical survey (Northamptonshire Archaeology 2007). Four trial trenches were also dug to determine the precise location

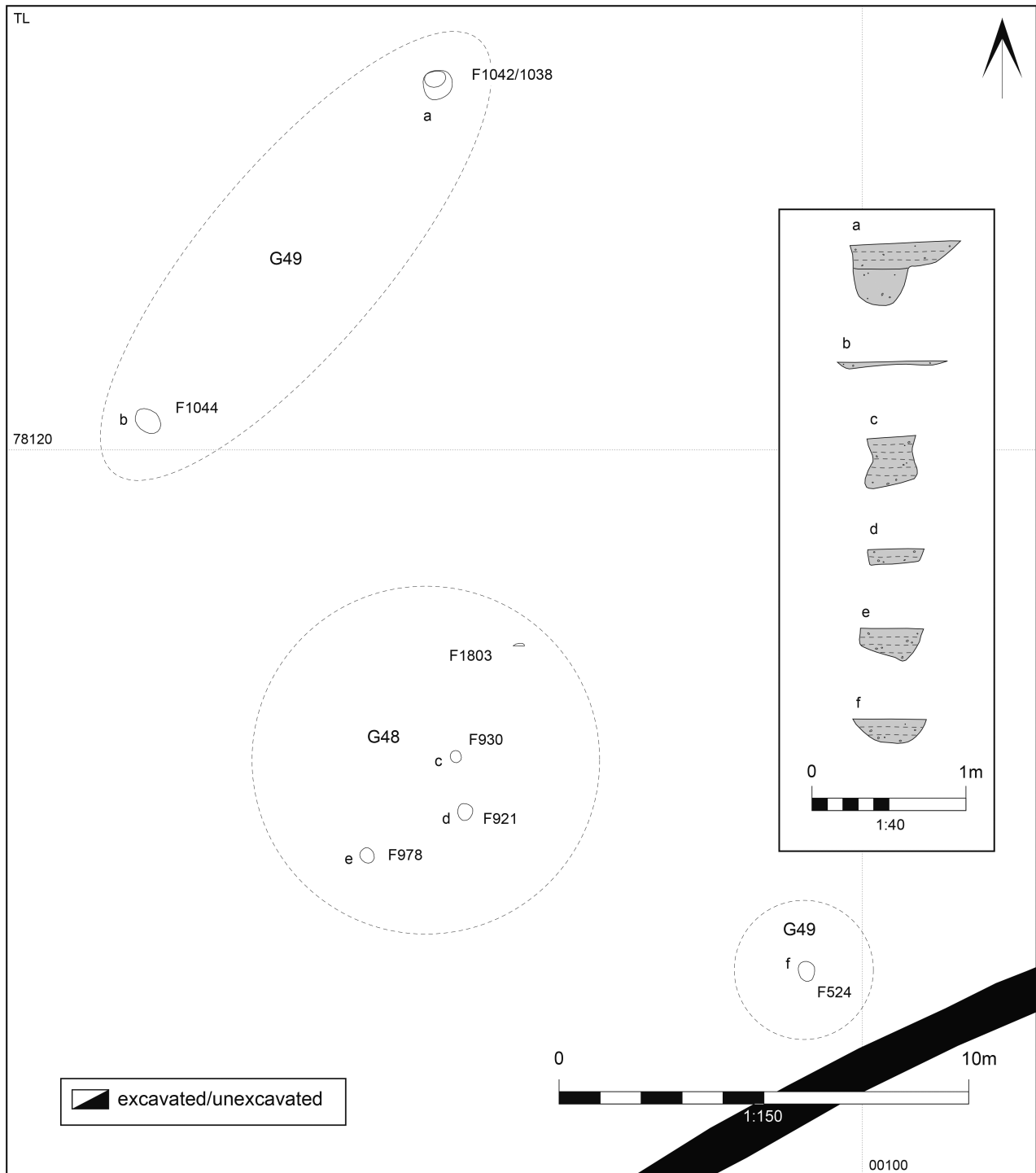


Figure 2.6: Cremation cemetery L19

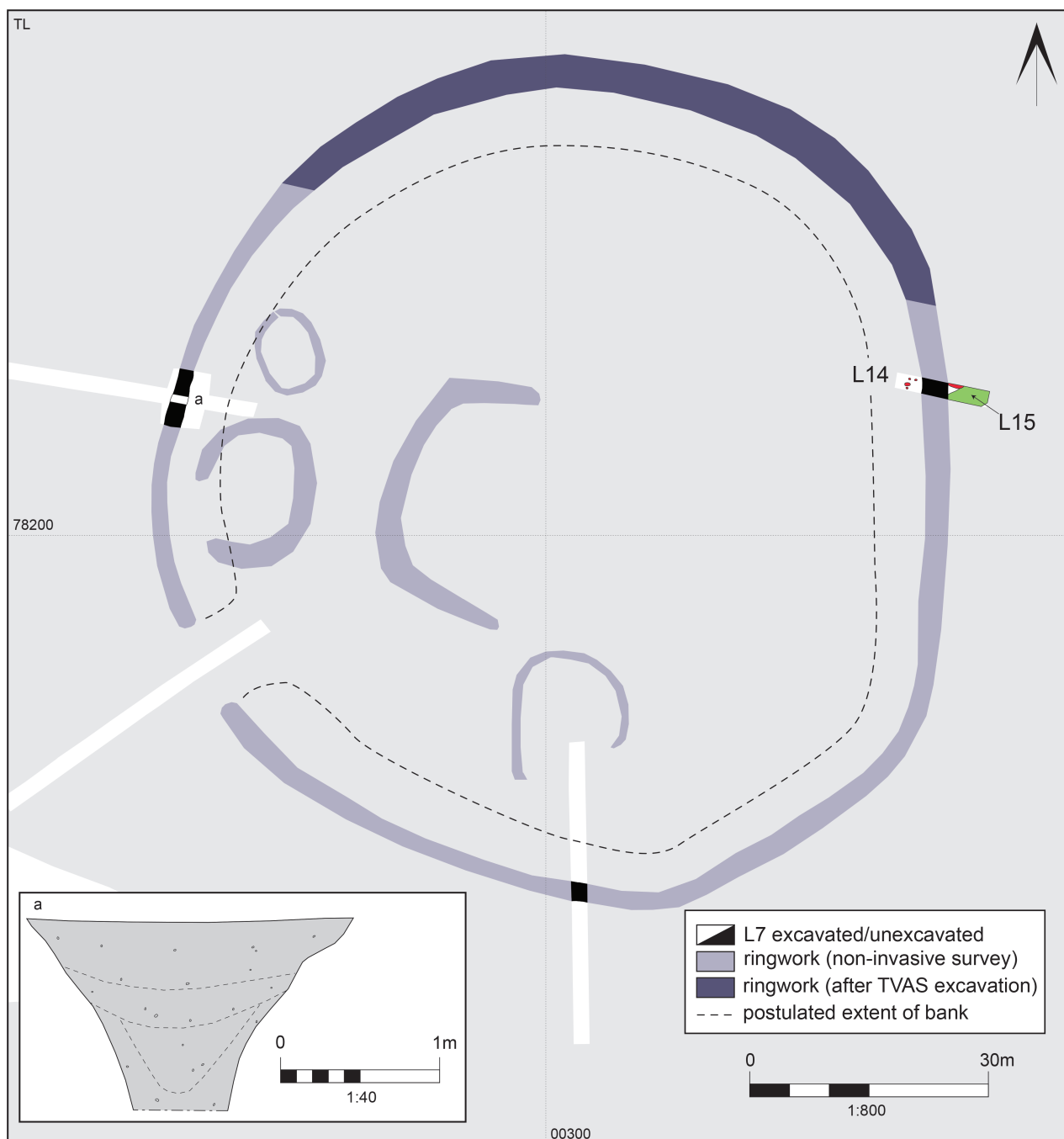


Figure 2.7: Ringwork SL2

and depth below ground level of its ditches, although only minimal hand-excavation was undertaken (Albion Archaeology 2018).

The ringwork ditch L7 was identified in three of the four trenches (Fig. 2.7); the trench to the south-west confirmed the location of the entranceway. The V-shaped ditch was 1.5–2.6m wide and more than 1.2m deep (Fig. 2.7 section a). Pottery of Bronze Age to Roman date was recovered from its upper fills. Another possible ditch L15 was found just beyond the east side of the ringwork ditch; it was c. 1.5m wide and c. 1.1m deep. The nature of the fills of both ditches were very similar and therefore they are considered to be possibly contemporary.

Geophysical anomalies in the ringwork's south-west quadrant indicate the presence of four curvilinear ditched enclosures, c. 10–25m in diameter, which probably indicate the location of roundhouses. A cluster of postholes

and small pits L14 was found just inside the ditch on the east side of the ringwork. These may be associated with the ringwork's internal bank – for which no other evidence was found in the trial trenches – or, and perhaps more likely, pre-date it.

2.3 EARLY/MIDDLE IRON AGE (PHASE 3)

Overview

The settlement and ringwork that originated in the middle Bronze Age/early Iron Age (Phase 2) were still in use during this period (Fig. 2.8). The Phase 3 settlement SL3 was principally evidenced by storage pits, water-pits and quarry pits. The absence of any roundhouses or other post-built structures suggests that the settlement core lay beyond the excavation area. Limited evidence (SL4) for continuing use of the ringwork was also recovered.

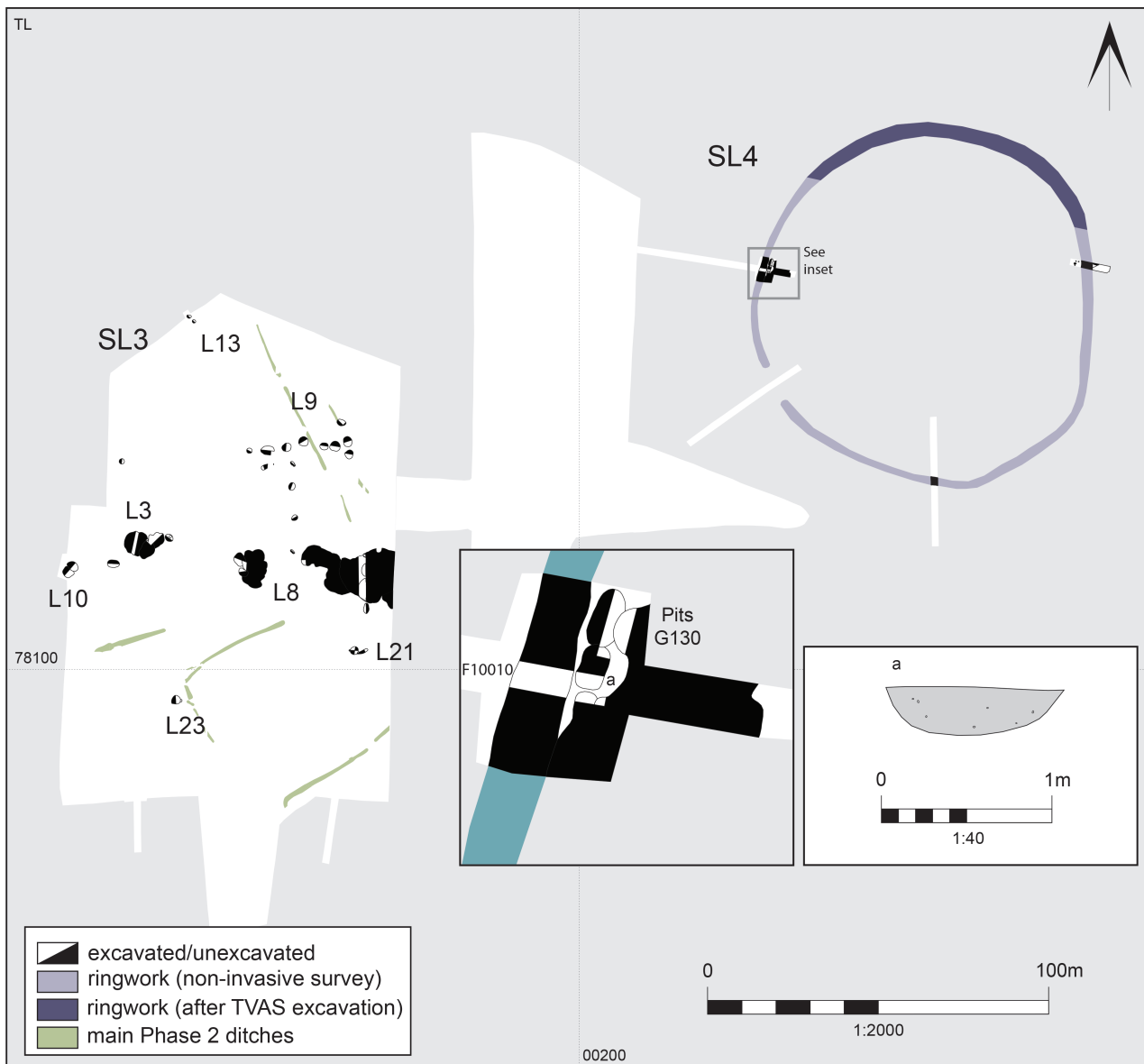


Figure 2.8: Overview plan of early/middle Iron Age (Phase 3)

Assignment of features to this phase was based on the recovery of 220 pottery sherds (3.6kg), most from SL3, and stratigraphic relationships indicating that some of the Phase 3 pits were later than Phase 2 ditches.

Settlement SL3

The pits of SL3 covered an area of c. 0.8ha (Fig. 2.9). Their functional classification is not precise. In general, however, the water-pits had steep sides and were over 1.1m deep; the storage pits had more symmetrical profiles and were under 1m deep; and the quarry pits had asymmetrical profiles, variable depths, and often appeared to be intercutting. The water-pits and quarry pits formed an E–W band across the excavation area. The water-pits (and a pond) were located to the south of most of the other features assigned to SL3.

Storage pits L9 and L13

All the features interpreted as storage pits were located to the north of the band of water-pits and quarry pits. They were all discrete features but ten of those in L9 formed a cluster covering a c. 30 × 30m area. Two additional storage pits L13 were located c. 40m to the north on

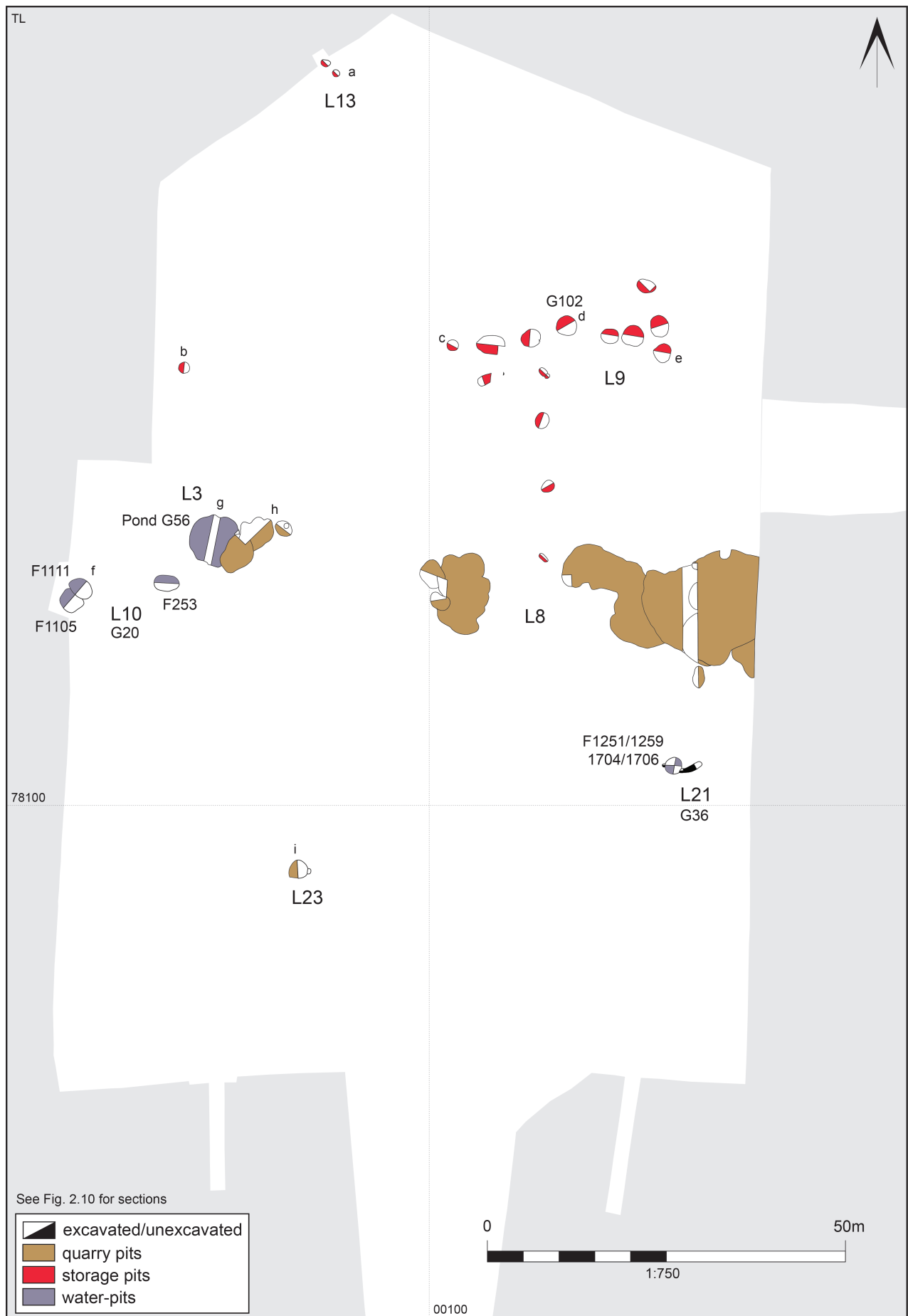
the limit of excavation. Most of the pits were circular, c. 1–4m in diameter and c. 0.8m deep, but only a few had the ‘classic’ steep-sided and flat-based profile (Fig. 2.10 sections a–e). Pit G102 (L9) produced a possible copper alloy awl (RA9).

Water-pits (L10 and L21) and pond L3

Three water-pits G20 (L10) and pond G56 (L3) formed a cluster to the west of SL3; a fourth water-pit G36 (L21) was located to the south-east (Table 2.3). The water-pits were c. 3m in diameter (Fig. 2.10 section f; Plate 2.3); whereas pond G56 was c. 7m in diameter (Fig. 2.10 section g). All were over 1.1m deep and machine-excavation or augering suggested a full depth of c. 1.5m. Pond G56 contained waterlogged plant remains but none survived in the water-pits.

Quarry pits L8 and L23

The majority of the quarry pits were located in an E–W band L8 across the excavation area, with one isolated pit L23 c. 40m to the south. The L8 pits comprised four clusters of apparently intercutting features. Where identifiable the individual pits were 2.5–6m in diameter



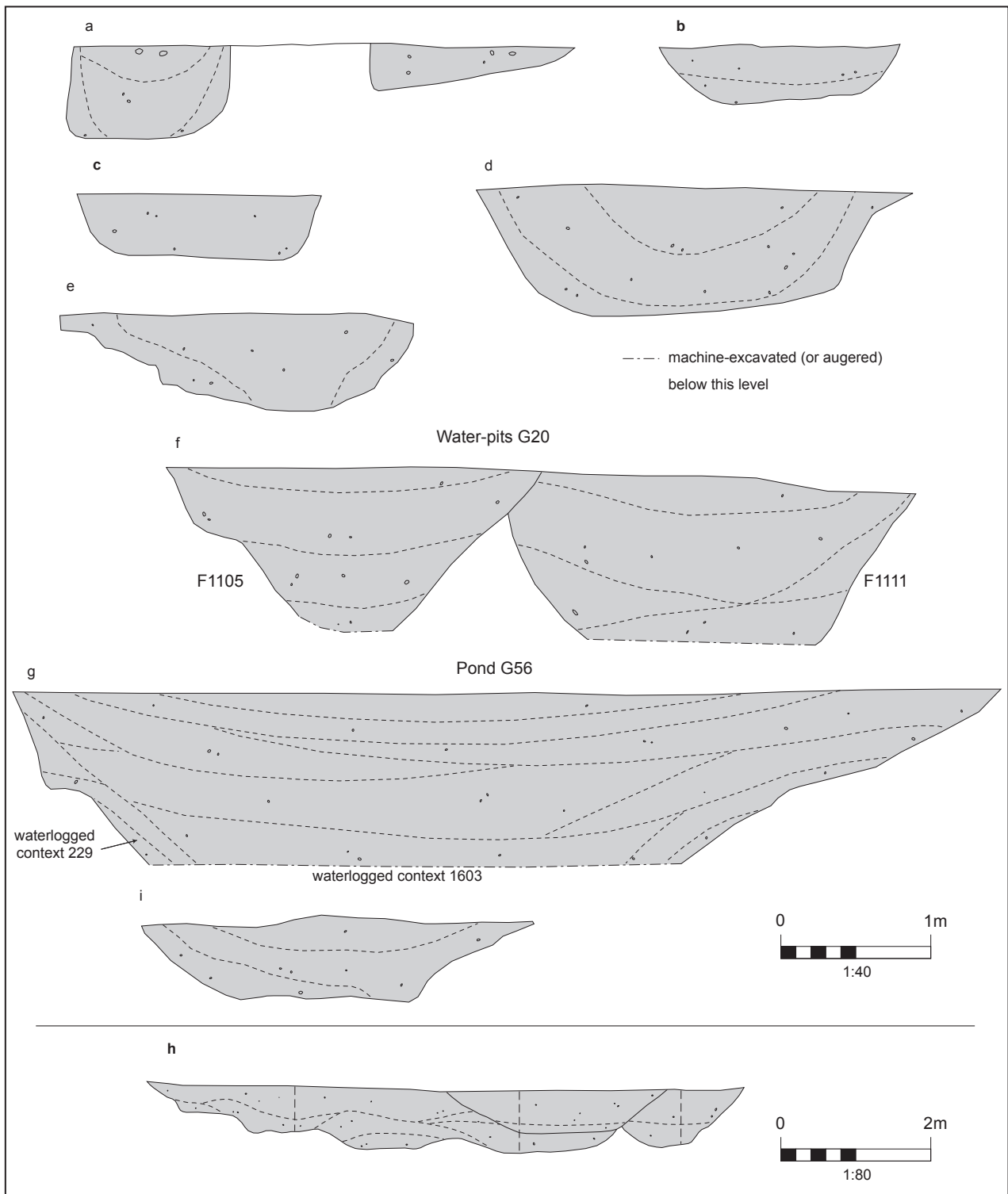


Figure 2.10: Selected sections from Fig. 2.9



Plate 2.3: Water-pit F253 (L10) prior to extension of excavation area, looking north. Scale 1m

and less than 0.8m deep, with asymmetrical profiles (Fig. 2.10 section h). Pit L23 was c. 2.6m in diameter and c. 0.6m deep (Fig. 2.10 section i); an adjacent post-hole was c. 0.6m in diameter and c. 0.2m deep. The quarry pits had probably been dug to extract clay and gravel.

Ringwork SL4

It is likely that the Phase 2 ringwork ditch was still partially open at this time, as the small pottery assemblage included pre-'Belgic Iron Age wares in its upper fills. The latter also yielded a fragment of human skull

Feature	G	L	P	Shape	Profile/description	Width (m)	Depth (m)
253	20	10	3	Oval	Concave. Slightly stepped side to east	3.5 × 2.4	>1.4
1105	20	10	3	Oval	Concave. Slightly stepped side to west	2.7 × 1.65	>1.1
1111	20	10	3	Oval	Concave with steep sides	3.2 × 2.5	>1.1
1251/1259/1704/1706	36	21	3	Circular	Concave with steep sides	2.4 × 2.3	>1.3
269	98	27	4	Sub-oval	Concave	4.2 × 2.4	c. 1.6 (augured)

Table 2.3: Early/middle Iron Age (Phase 3) and late Iron Age/early Roman (Phase 4) water-pits

(from segment F10010), which was radiocarbon-dated to the late Bronze Age (Table A3).

Just inside and broadly parallel to the western ringwork ditch was a cluster of intercutting pits G130 (Fig. 2.8). Limited hand-excavation identified five pits that appeared to be c. 1 × 2m in extent and less than 0.5m deep (Fig. 2.8 section a). They produced two sherds of indeterminate shelly pottery and, as they were located in the zone of the postulated ringwork bank, were assigned to this (post-ringwork) phase.

2.4 LATE IRON AGE/EARLY ROMAN (PHASE 4)

Overview

Limited evidence for continuing settlement and other activity within the ringwork was recovered (Fig. 2.11). The small number of features within enclosure system SL5 suggests that the focus of the settlement lay outside the excavation area. Some of the enclosure ditches respected the location of Phase 3 pits which must still have been visible in the landscape.

The Phase 4 pottery assemblage – both Iron Age and Roman – totals 166 sherds (4.3kg), most deriving from quarry pits L25 and L29. Only a small assemblage (c. 0.8kg) was recovered from the enclosure and trackway ditches. It

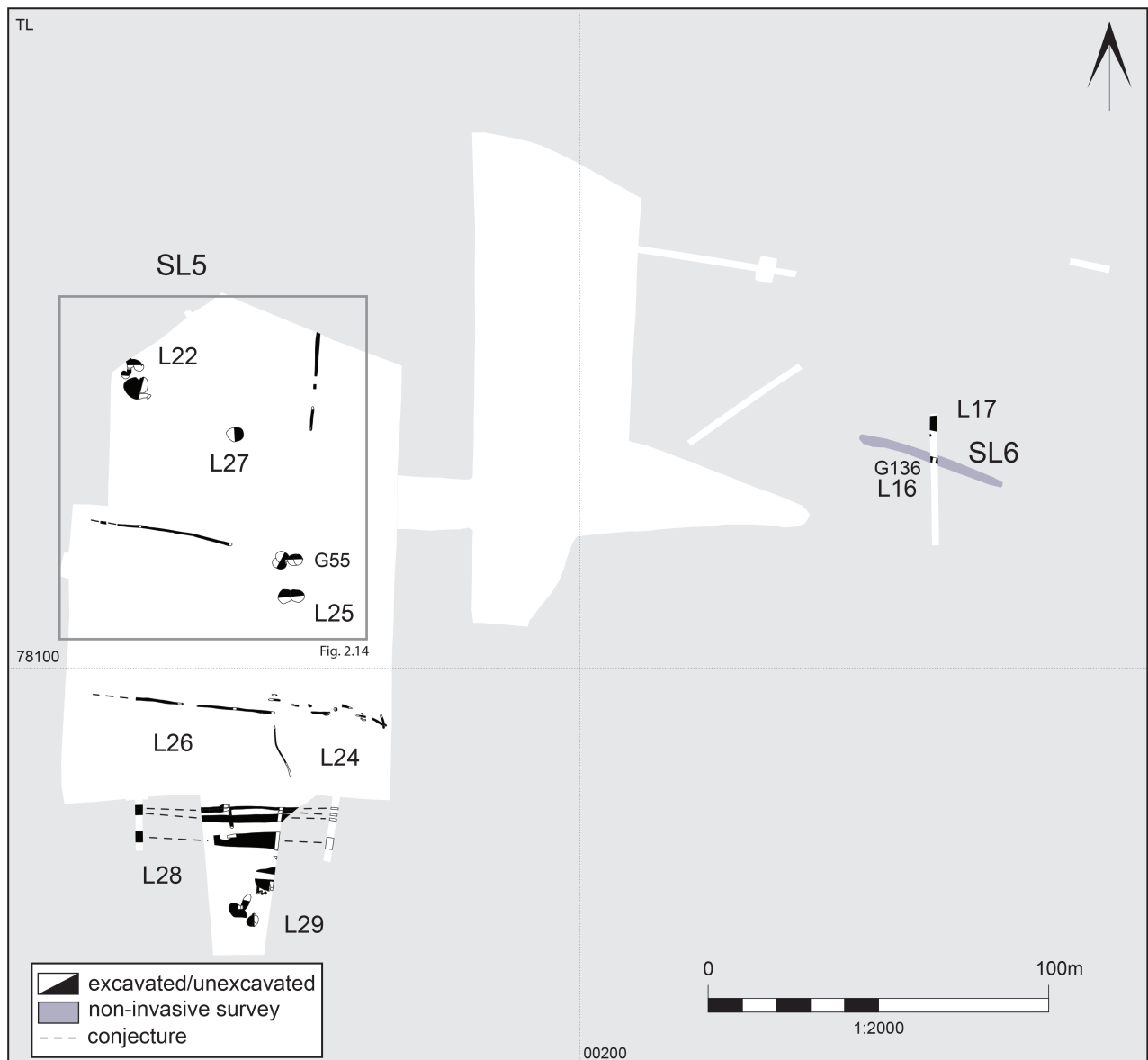


Figure 2.11: Overview plan of late Iron Age/early Roman (Phase 4)

is possible – in at least some cases – that this material is residual in later, Anglo-Saxon, features but, in the absence of any pottery of that date, the ditches have been assigned to Phase 4. Roman artefacts within a small and disparate assemblage are likely to include rotary query fragment RA27, iron ox goad RA28, and Roman coin RA23.

Enclosure system SL5

Enclosure system SL5, with integral E–W trackway L28, covered an area of c. 1.1ha (Fig. 2.11). It was defined by ditches which continued beyond the limit of excavation.

A single water-pit and three clusters of quarry pits were located within the enclosures.

Enclosures L24, L26 and L27

Enclosures L24 and L26 lay immediately to the north of trackway L28. They were defined by ditches c. 0.4–1.3m wide and c. 0.1–0.4m deep (Fig. 2.13 sections a–c and Fig. 2.15 section c). The north side of L24 was defined by an unusual arrangement of slightly off-set ditch segments and pits G42. A c. 4m-wide gap between ditches G40 and G41 in the north side of enclosure L26 indicates an

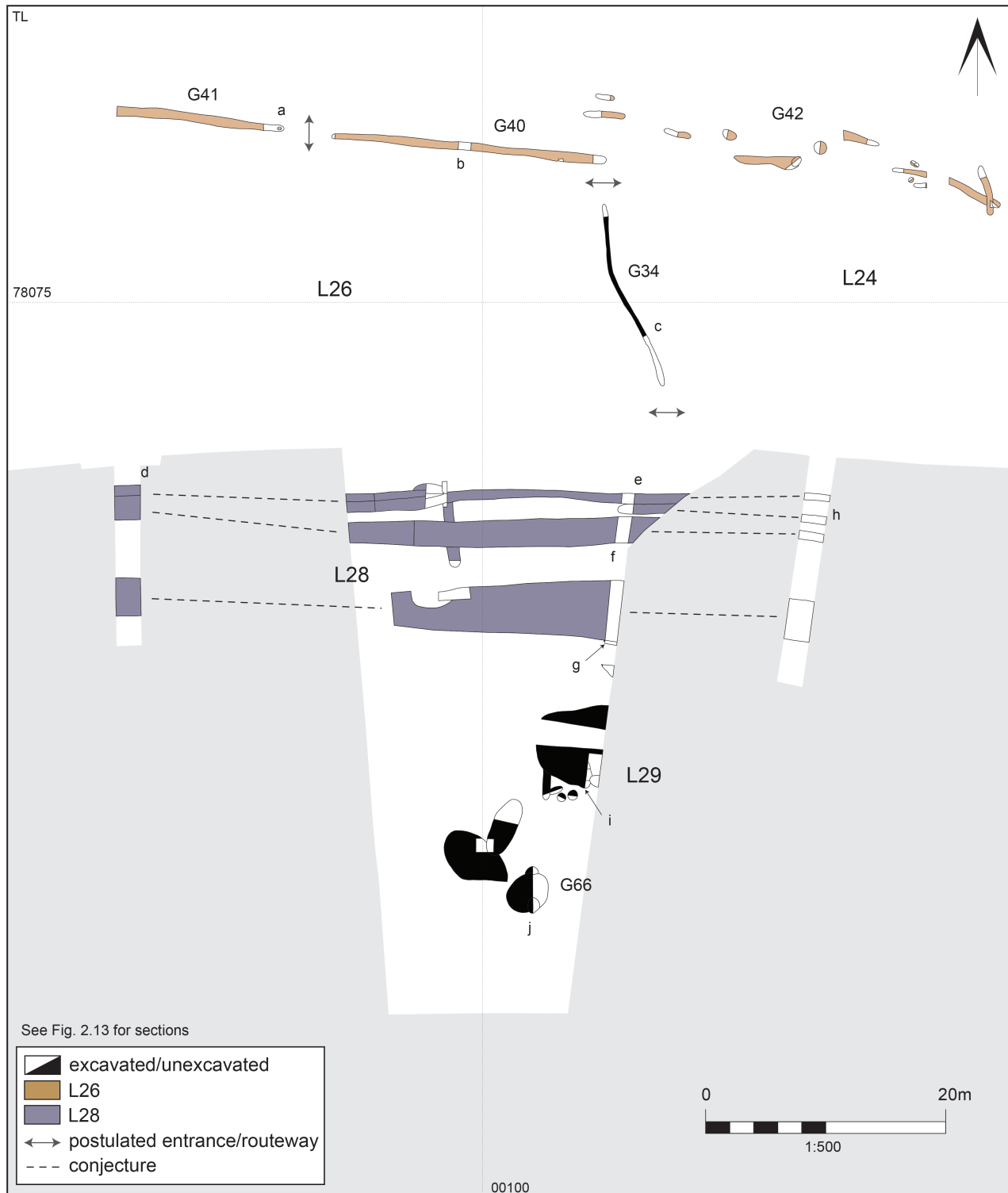


Figure 2.12: Trackway L28 and enclosures L24 and L26

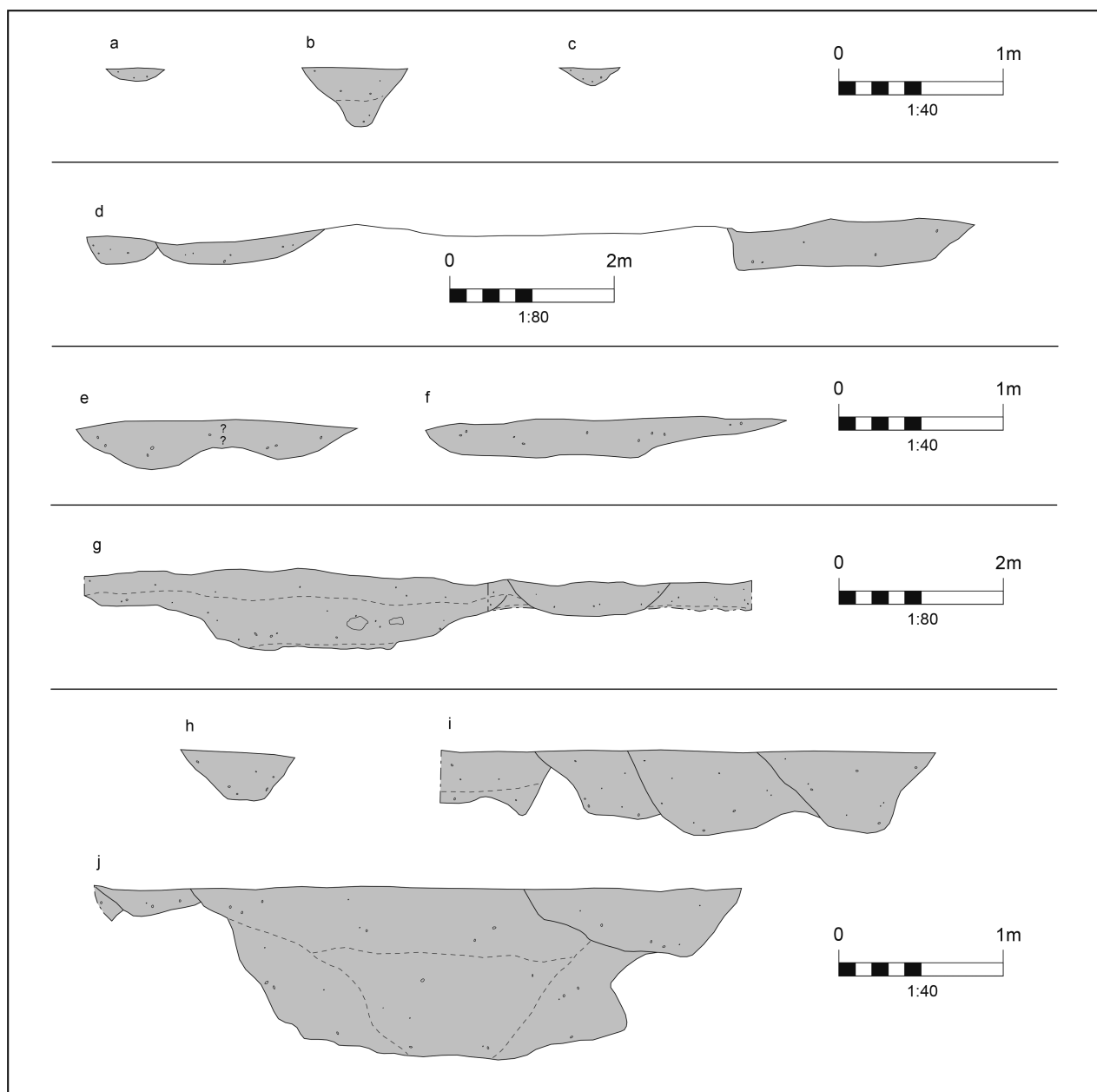


Figure 2.13: Selected sections from Fig. 2.12

entranceway (Fig. 2.12). A posthole in the terminal of ditch G41 is probably associated with an entrance structure. There appear to have been two gaps in ditch G34 to enable movement between enclosures L24 and L26.

L27 to the north of enclosures L24 and L26 probably comprised two enclosures, although the ditches were

intermittent (Fig. 2.14). No firm evidence for terminals or causeways was identified and no ditches defined the enclosure's south-east corner. The enclosures contained water-pit G98 and a cluster of quarry pits L22.

Water-pit F269/G98 was located in the south-east part of enclosure L27. It was circular in plan, c. 5m in diameter and c. 1.6m deep (Fig. 2.15 section b).

Trackway L28

The east–west trackway was defined by parallel ditches, which continued beyond the limit of excavation. The close spacing of the ditches on the north and south sides of the trackway suggests that they were not contemporary, although it was not possible to identify a sequence. The ditches were 1–5m wide and under 0.6m deep (Fig. 2.12 and 2.13 sections d–h). The redefinitions of the ditches would indicate that the trackway was between 3m and 7m wide.



Plate 2.4: Quarry pits L22, looking north. Scale 1m



Figure 2.14: Enclosure L27 and pits L22 and L25 (SL5)

Quarry pits L22, L25 and L29

Three clusters of intercutting quarry pits were identified: L22 and L25 some distance to the north of the trackway (Fig. 2.14); and L29 to the south (Fig. 2.12). Where identifiable, individual pits usually had irregular profiles and were 1–7m in diameter and under 0.8m deep (Fig. 2.13 sections i; Fig. 2.15 section a and d; Plate 2.4). However, one was c. 1.2m deep Fig. 2.13 section j).

Dispersed activity SL6

A ditch G136 (L16) and pits L17 were identified within the Phase 2 ringwork. The ditch was aligned NW–SE and had a distinct V-shaped profile (Fig. 2.16 section a). It was visible as cropmark on aerial photographs and was clearly not contemporary with the ringwork. This was confirmed by the recovery of an early 4th-century coin RA23 and an iron ox goad RA28. Pits L17 were of

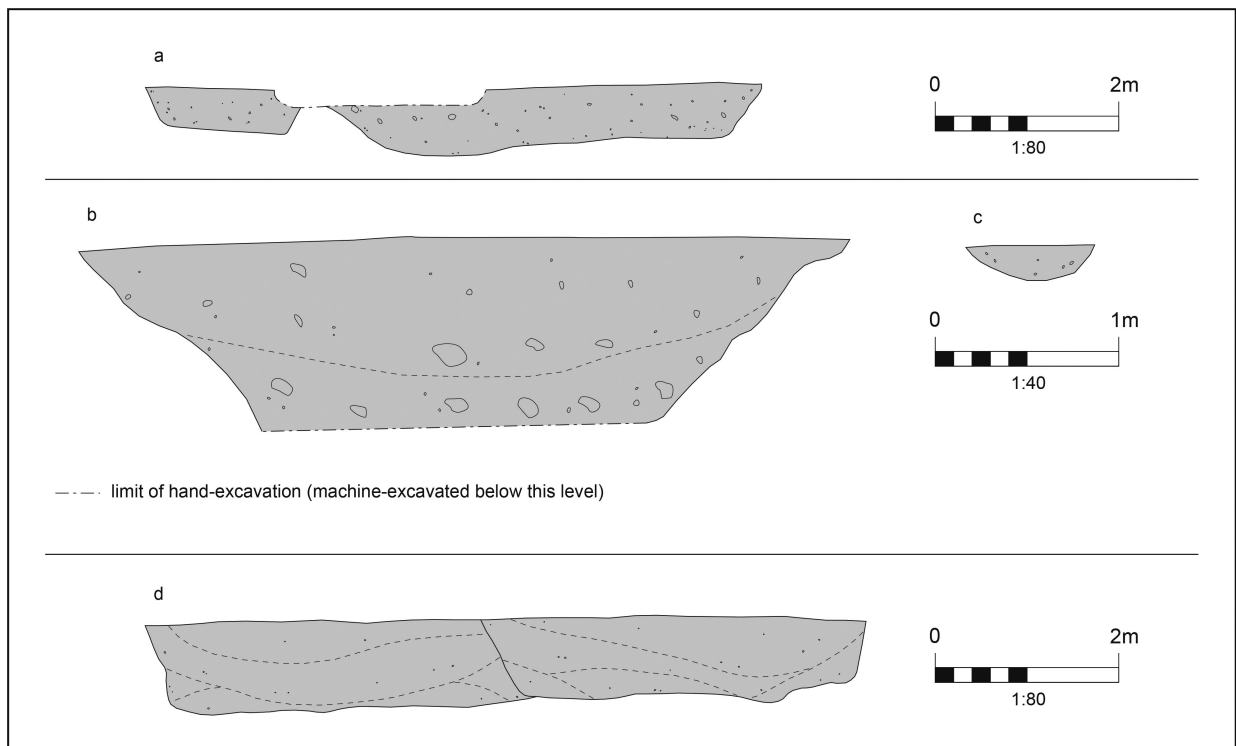


Figure 2.15: Selected sections from Fig. 2.14

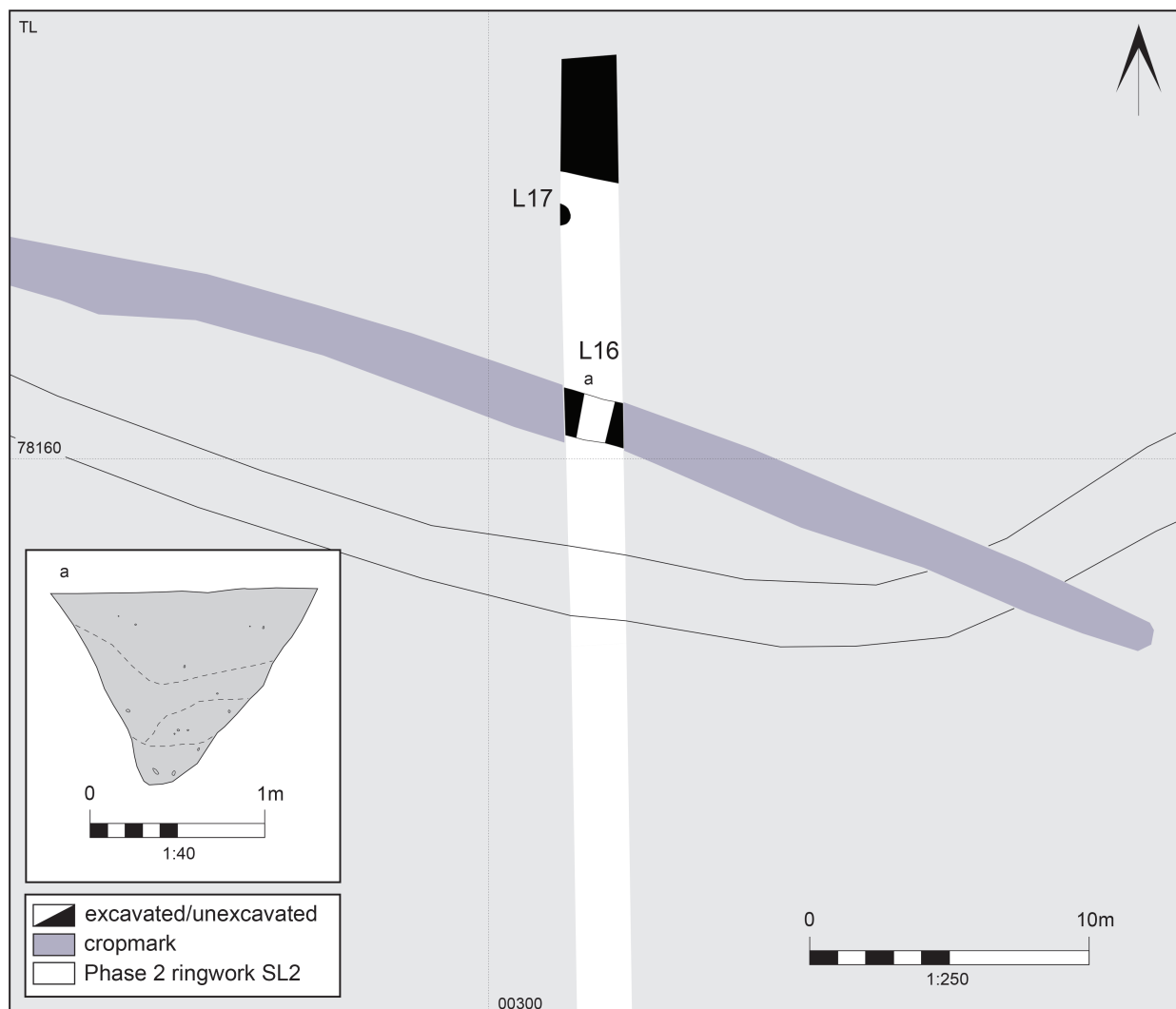


Figure 2.16: Activity focus SL6

contrasting size and were only partially visible within the trial trench. They were not excavated as they were within the preservation *in-situ* area.

2.5 EARLY ANGLO-SAXON (PHASES 5 AND 6)

Overview

The early Anglo-Saxon settlement SL7/8/9 covered at least 1.1ha and was in the same area as the previous settlements (Fig. 2.17). It comprised a concentration of rectangular ground-level buildings SL7, activity focus SL8, and three possible sunken-featured buildings (SFB)

SL9. The latter were located on the south-east fringe of the settlement alongside the activity focus. The buildings appeared to respect some of the Phase 4 enclosure ditches, which were presumably still visible in the landscape.

The Anglo-Saxon pottery assemblage totals 39 sherds (490g). Although no diagnostic forms were present, the absence of characteristic middle Anglo-Saxon types, such as Maxey or Ipswich wares, suggests an earlier Anglo-Saxon date. Thirty-six sherds (452g) derived from the three possible SFBs. Only three definite early Anglo-Saxon sherds were recovered from postholes of two of the ground-level buildings. A complete early-middle



Figure 2.17: Overview plan of early Anglo-Saxon (Phase 5 and 6)

Anglo-Saxon ceramic loom weight (RA25) was recovered from pit G119, which was dug into possible SFB G118. A furnace bottom or slag cake of ferrous smelting slag (7.5kg) was recovered from pit G24 (SL8); slags of this type are known in Britain from the Anglo-Saxon period onwards.

In addition to the early Anglo-Saxon pottery, sherds of Bronze Age, Iron Age and Roman date (and a late Bronze Age/early Iron Age weight) were also recovered from the early Anglo-Saxon features. To aid analysis in light of the ambiguity of the artefactual dating evidence, the ground-level buildings were assigned to Phase 5 and the possible SFBs (well-dated by 36 sherds of Anglo-Saxon pottery) to Phase 6. Five radiocarbon determinations were obtained from four postholes associated with the ground-level buildings and one small pit. These produced four early Anglo-Saxon dates and one middle/late Bronze Age date (Table A3); the latter is presumed to derive from residual charcoal that came from the earlier, Phase 2 settlement.

Settlement core SL7

The settlement core contained hundreds of postholes, amongst which the plans of nine ground-level buildings (L31) could be identified (Fig. 2.18; Plate 2.5). Sixteen smaller clusters and arrays of postholes probably indicate the location of other buildings and structures (L30).

Ground-level buildings L31

(Figs 2.19–2.21; Table 2.4; Plates 2.6–2.9)

Seven of the buildings (G71, G76, G81, G82, G87, G92, G125) were aligned N–S; only G63 and G96 were clearly aligned E–W. Where a complete ground plan could be determined, the buildings were 5.9–12.5m long and 4.5–5.7m wide (Table 2.4). The arrangement of postholes G76 and G82 suggests that they may be parts of one building rather than two separate ones.

The postholes in the wall lines were 0.1–0.9m in diameter and 0.05–0.6m deep, with the majority in the middle of these ranges (Fig. 2.19 sections a–e; Fig. 2.20

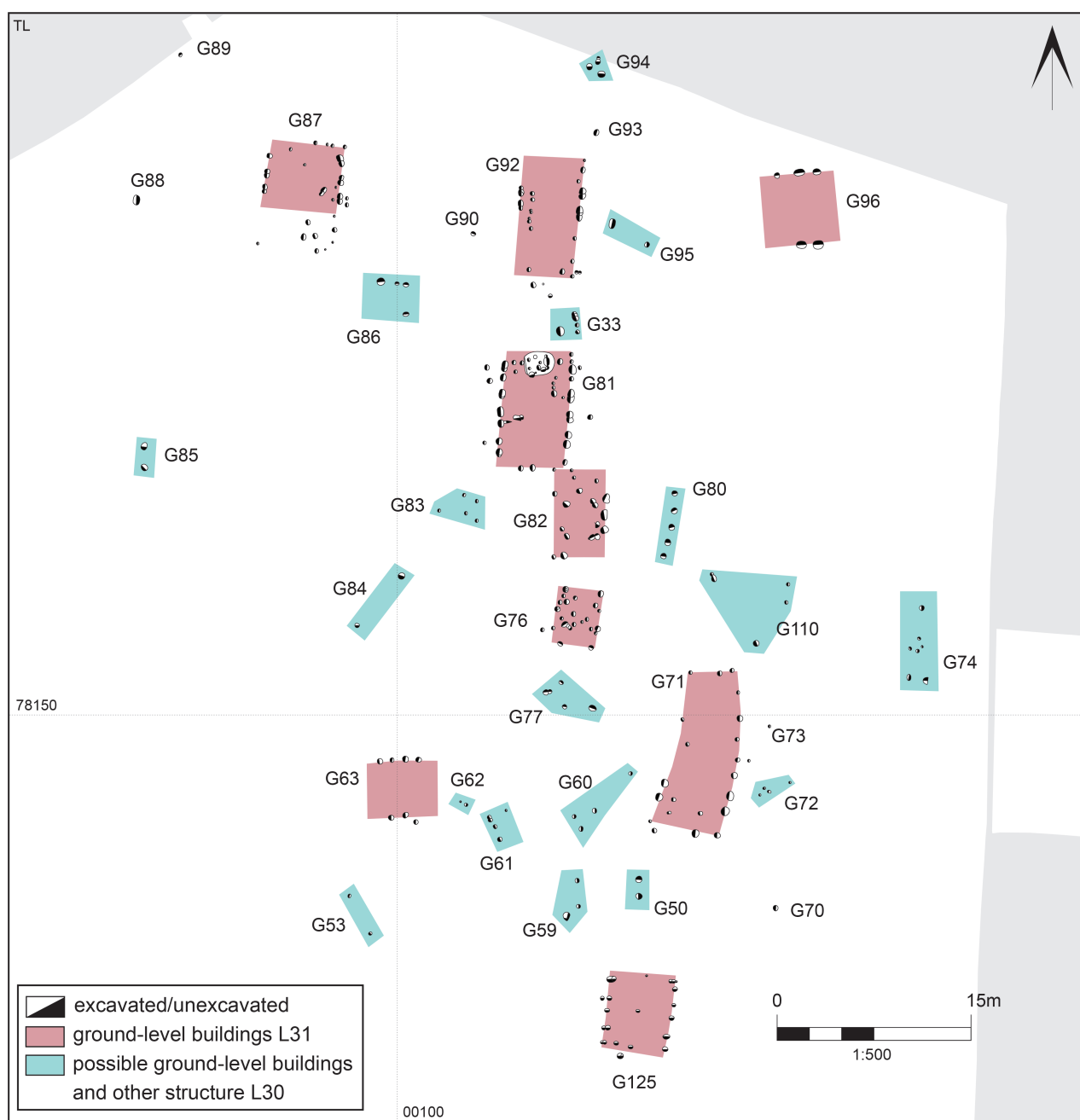


Figure 2.18: Ground-level buildings and structures within settlement core SL7



Plate 2.5 Aerial view of ground-level buildings G81, G82, G76, G71 and G125, looking south-east



Plate 2.6: Ground-level building G81 (L31), looking west. Scale 1m

sections b, c and f; Fig. 2.21 sections b, c and f; Table 2.4). Double postholes were observed in the external walls of several buildings – most clearly seen in buildings G81 (Fig. 2.20 section a), G82 (Fig. 2.20 section d), G87 (Fig. 2.20 section e), G92 (Fig. 2.21 section a) and G125 (L31) (Fig. 2.21 sections d–e). Based on their frequency and varied location, they are likely to be associated with repairs rather than representing doorways. Postpipes were only visible in four postholes in building G76; 0.2–0.26 in diameter (Fig. 2.19 section d).

Other than a layer within building G81 (see below), the only surviving internal features were postholes.

Buildings G81, G87 and G92 had some evidence for possible internal walls, with the best-preserved in the north-east part of building G81 (Fig. 2.20). This building also featured five external postholes within 1.5m of its walls; they were under 0.3m in diameter and 0.2m deep – smaller than the postholes that formed the building's walls.

The silty layer [1012] at the north end of building G81 was c. 2m in diameter and c. 0.15m thick (Fig. 2.20). Its location and its association with a concentration of postholes may indicate the presence of an entrance.

G	L	P	Evidence	Alignment	Extent L x W (m)	Posthole diameter (m)	Posthole depth (m)	Postpipe diameter: depth (m)	Finds	Radiocarbon dating
22	32	5	Wall lines: postholes (12)	?N-S	5.4 x 4.5	0.2-0.85	0.05-0.2	-	-	-
23	32	5	Possible building: postholes (11)	uncertain	8 x 6	0.2-0.5	0.03-0.2	-	25g animal bone 12g Anglo-Saxon pottery (1 sherd)	-
63	31	5	Wall lines: postholes (7)	E-W	>3.5 x 4.3	0.35-0.45	0.1-0.4	-	-	-
71	31	5	Wall lines: postholes (17) Internal postholes (5)	NE-SW	12.6 x 4.7	0.3-0.75	0.05-0.3	-	15g animal bone	-
76	31	5	Wall lines: postholes (15, 4 with postpipes) Internal postholes (8)	NE-SW	4.8 x 3.7	0.25-0.55	0.05-0.5	0.15-0.3; 0.35-0.5	3g late Bronze Age/early Iron Age pottery (1 sherd)	-
81	31	5	Wall lines: postholes (40) Internal postholes (10) Other features (2)	N-S	8.5 x 4.8	0.15-0.9	0.05-0.45	-	86g animal bone	-
82	31	5	Wall lines: postholes (15) Internal postholes (4)	N-S	6.9 x 3.8	0.1-0.75	0.05-0.5	-	198g animal bone 15g late pre-Belgic Iron Age pottery (2 sherds)	-
87	31	5	Wall lines: postholes (25) Internal postholes (7)	N-S	8.5 x 5.4	0.15-0.6	0.1-0.4	-	2g animal bone	1111-914 cal. BC (SUERC-78763; 2840±35 BP from hawthorn charcoal)
92	31	5	Wall lines: postholes (23) Internal postholes (7)	N-S	11 x 4.3	0.1-0.5	0.1-0.6	-	-	-
96	31	5	Wall lines: postholes (5)	E-W	>3.5 x 5.4	0.4-0.8	0.1-0.2	-	26g Anglo-Saxon pottery (2 sherds)	-
125	31	5	Wall lines: postholes (20) Internal postholes (1) External postholes (2)	N-S	5.6 x 4.6	0.15-0.55	0.1-0.6	-	4g animal bone	542-650 cal. AD (SUERC-78766; 1465±35 BP from blackthorn/cherry charcoal) 580-654 cal. AD (SUERC-84096; 1433±24 BP from unidentified cereal grain)

Bold measurement= where there is certainty. Not bold measurement= uncertainty. All weights have been rounded up to the nearest 0.01kg

Table 2.4 Early Anglo-Saxon (Phase 5) ground-level buildings L31 and L32



Plate 2.7: Ground-level building G81 (L31), looking south prior to excavation of F1012. Scale 1m



Plate 2.8: Ground-level building G125 (L31) during cleaning, looking south

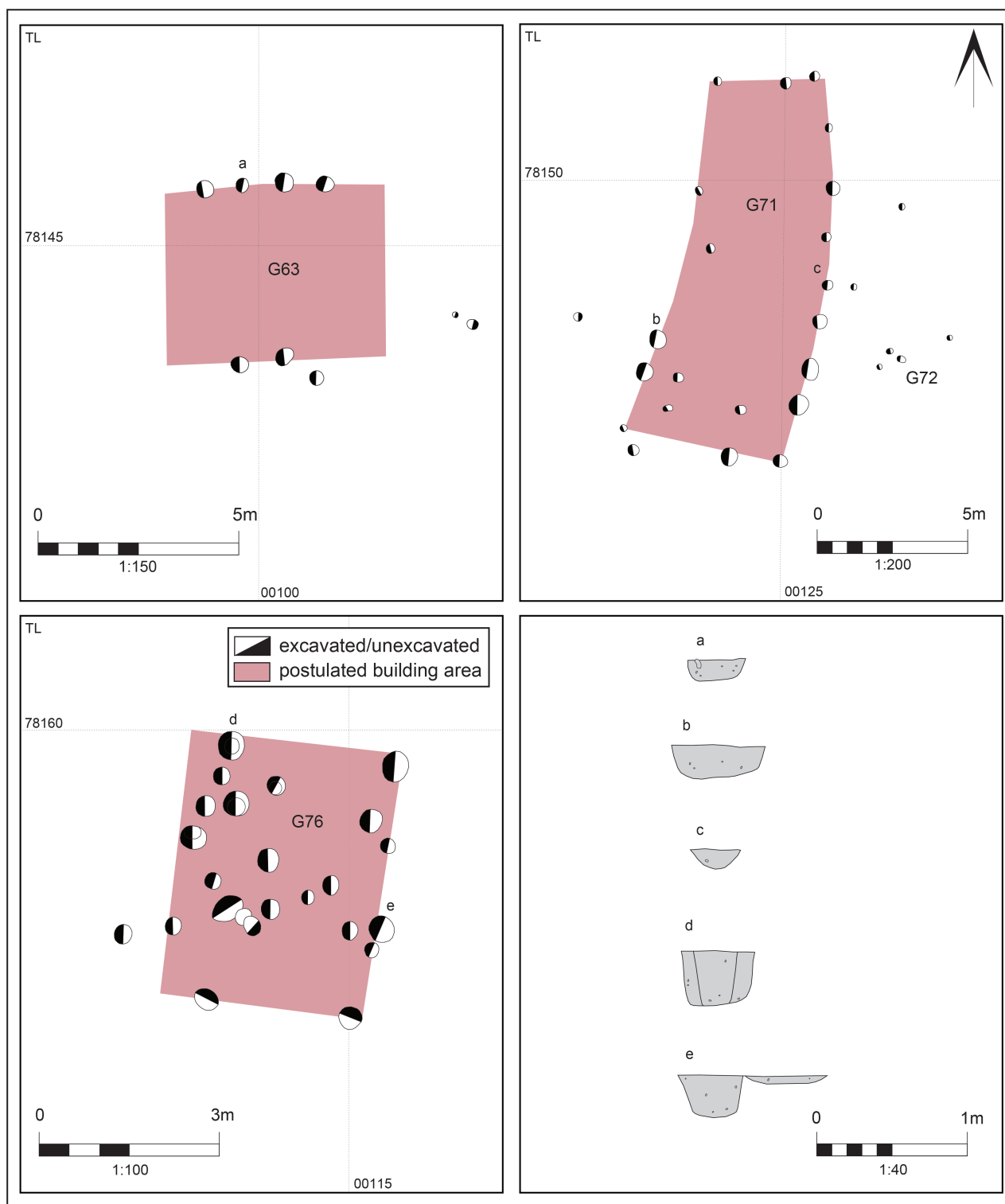


Figure 2.19: Ground-level buildings G63, G71 and G76 (all SL7), with selected sections

Charcoal and cereal grain from one of the double postholes in building G125 were radiocarbon-dated to the early Anglo-Saxon period (Fig. 2.21; SUERC 78766 and 84096).

Possible ground-level buildings L30

It is likely that some of the 16 smaller clusters and arrays of postholes indicate the location of other ground-level buildings and structures. An alignment of five postholes

G80 is perhaps the most convincing as representing one wall of a rectangular building. Individual clusters ranged from 2.5–6m in diameter. The postholes were similar in size to those of the L31 buildings and, like them, occasionally featured double postholes, e.g. G33, G77, G110.

Charcoal from one of the postholes of G33 was radiocarbon-dated to the early Anglo-Saxon period (Fig. 2.21; SUERC 78764).

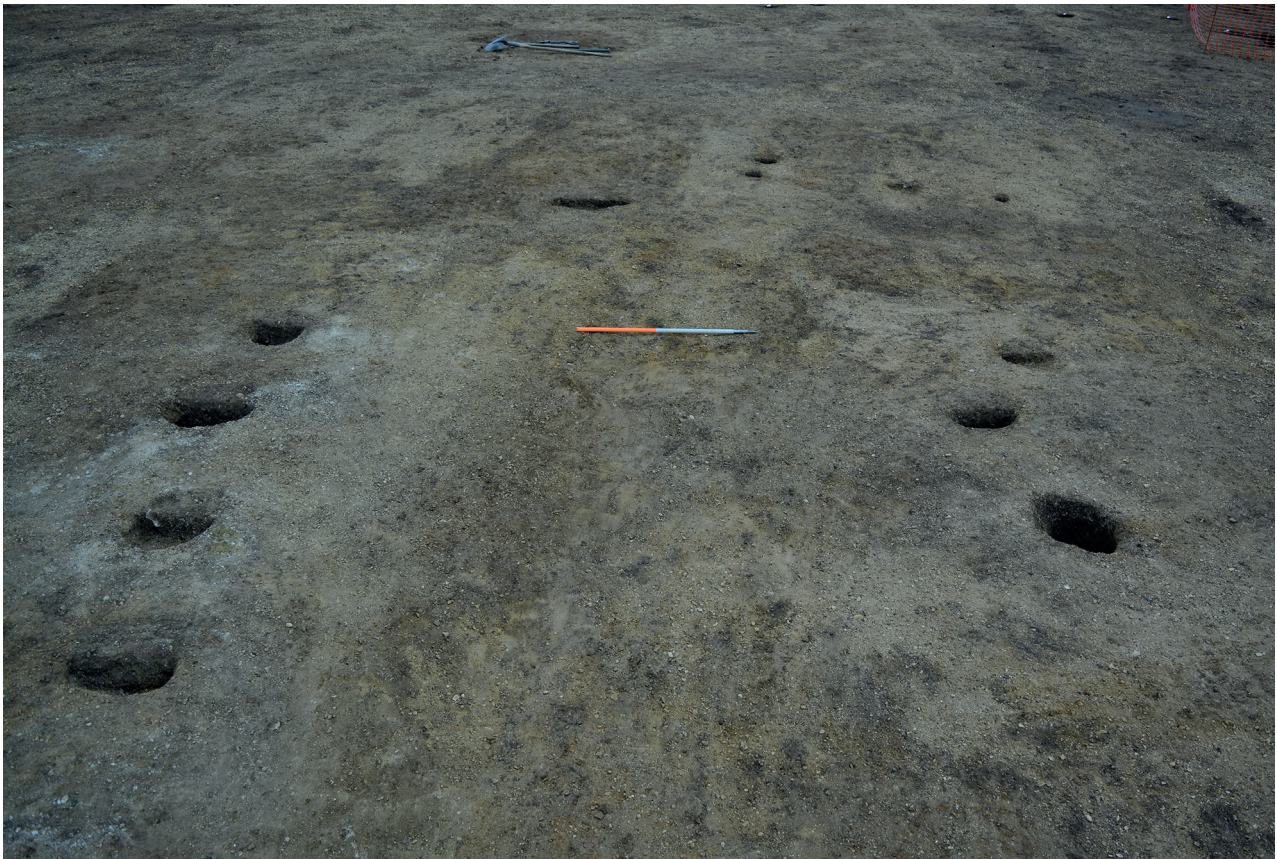


Plate 2.9: Ground-level building G63 (L31), looking east. Scale 1m

Settlement activity focus SL8

An activity focus comprising what appear to be two adjacent ground-level buildings (or the surviving parts of a single building) and a pit were located *c.* 30m to the south of SL7 (Fig. 2.17). The buildings L32 were located adjacent to one of the Phase 4 ditched boundaries. Pit G24, *c.* 12m to the north-west of the buildings, produced evidence of possible ironworking.

The form and layout of the constituent postholes of buildings G22 and G23 were similar to those of the buildings in the settlement core L31 (Fig. 2.22 sections a–d) Table 2.4). The only noticeable difference was that they were smaller and the near-absence of double postholes.

Pit G24 was *c.* 0.7 × 0.5m in extent and *c.* 0.15m deep (Fig. 2.17 section a). Its single fill contained a furnace bottom or slag cake of ferrous smelting slag. Unburnt limestone fragments were dispersed irregularly throughout the pit, the sides of which showed no evidence of *in-situ* burning, indicating that the feature was not a hearth/furnace. Charcoal from the pit was radiocarbon-dated to the early Anglo-Saxon period (SUERC 78775).

Possible sunken-featured buildings SL9

SL9 comprises three isolated features G38, G118 and G151, lying *c.* 70m apart to the south-east of settlement focus SL7. Their apparent NE–SW alignment is probably accidental. During fieldwork they were interpreted as pits and, therefore, two were only half-sectioned. However, their form and the presence of early Anglo-Saxon pottery suggests that they are more likely to be sunken-featured buildings. G118 was dug into late Iron Age/early Roman (Phase 4) trackway L28.

The features were 3.3–5.25m long and 2.4–3.8m wide. G38 and G118 were *c.* 0.15–0.25m deep; G151 was *c.* 0.9m deep (Fig. 2.23 sections a–c; Table 2.5). No associated postholes were found. A central pit G119 (*c.* 0.8m in diameter and *c.* 0.4m deep) in building G118 appeared to have been dug after the building had gone out of use, although it did contain a complete ceramic loom weight, an artefact type commonly associated with sunken-featured buildings.

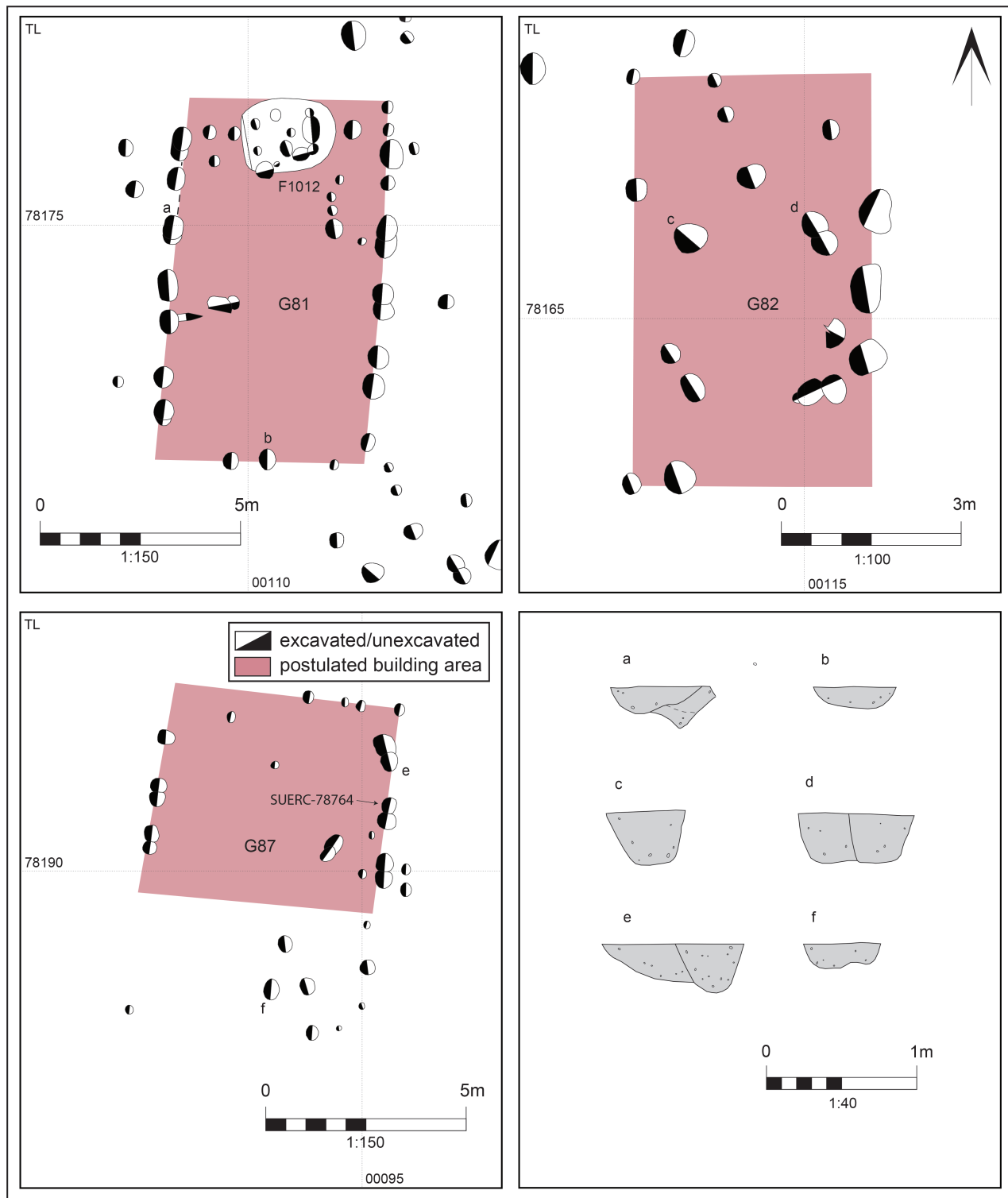


Figure 2.20: Ground-level buildings G81, G82 and G87 (all SL7), with selected sections

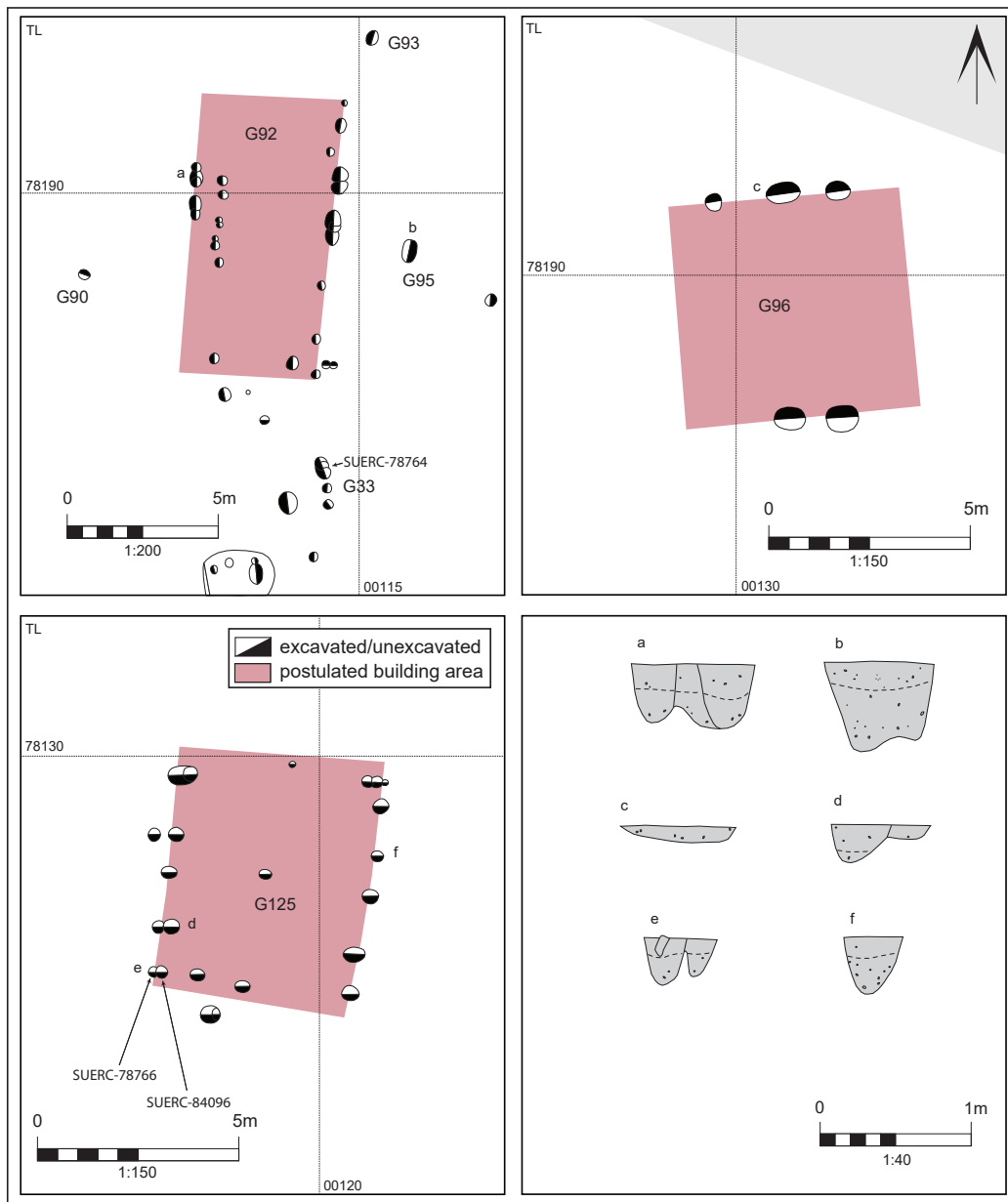


Figure 2.21: Ground-level buildings G92, G96 and G125 (all SL7), with selected sections

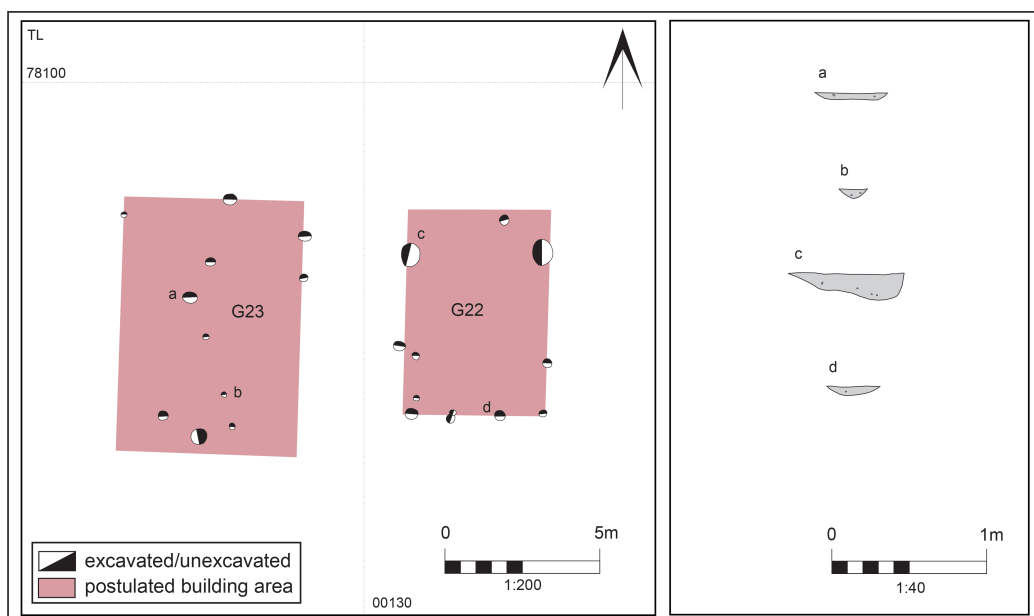


Figure 2.22: Ground-level buildings G22 and G23 (both SL8), with selected sections

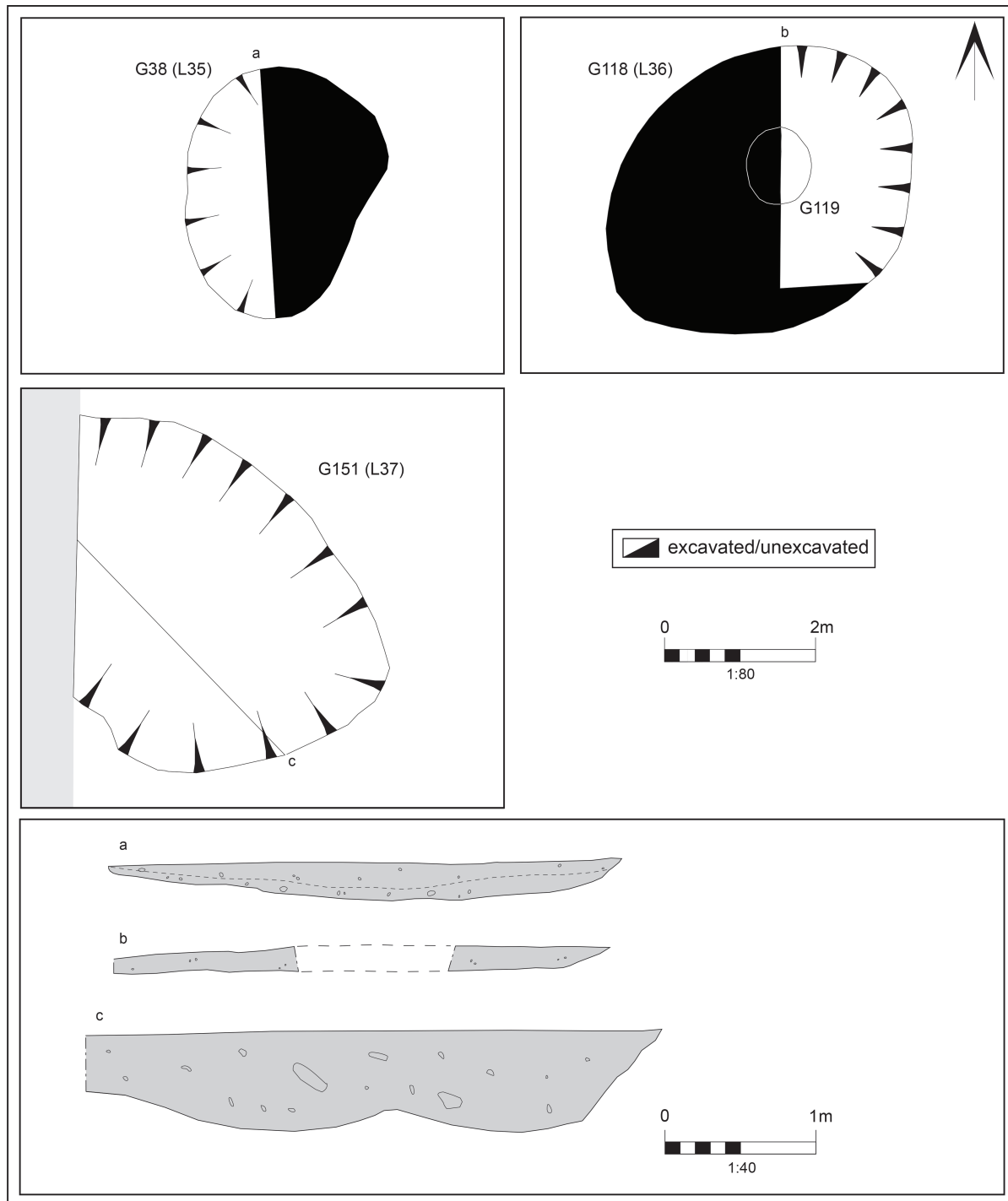


Figure 2.23: Possible SFBs G38, G118 and G151 (all SL9), with selected sections

G	L	P	Alignment	Shape of sunken area	Dimensions length:width:depth (m)	Profile	Finds
38	35	6	N-S	Oval	3.3:2.4:0.25	Gently sloping sides and fairly flat base	Anglo-Saxon pottery (17 sherds, 198g) Animal bone (14 frags, 121g)
118	36	6	NE-SW	Oval	4.5:3.6:0.15	Gently sloping sides and fairly flat base	3rd/4th century Roman pottery (1 sherd, 5g) Anglo-Saxon pottery (8 sherds, 61g) Animal bone (11 frags, 151g) RA25 – Loom weight
151	37	6	NW-SE	Sub-rectangular	5.25:3.8:0.9	Steep sides and concave base	Anglo-Saxon pottery (11 sherds, 193g) Animal bone (24 frags, 592g)

RA = Registered artefact number

Table 2.5 Early Anglo-Saxon (Phase 5) possible sunken-featured buildings

2.6 MEDIEVAL (PHASE 7)

Two arrays of furrows SL10, indicative of medieval open-field cultivation, were identified within the excavation area (Fig. 2.24). Surviving ridge and furrow earthworks in the western part of the development site were also recorded by topographical survey prior to the open-area excavation.

The majority of the furrows L41 were aligned north–south, on a similar (but not identical) alignment to the late Iron Age/early Roman (Phase 4) ditches. Perpendicular east–west aligned furrows L40 were on the same alignment as Phase 4 trackway L28, which was overlain by a headland.



Figure 2.24: Overall plan of medieval (Phase 7) open-field systems

2.7 POST-MEDIEVAL (PHASE 8)

Two extensive zones of post-medieval quarrying were identified in the south-west and north-east corners of the excavation area (Fig. 2.25). Both extended beyond the limit of excavation.

The quarry pits to the north-east (L5, L12, L51, L52 and L53) covered an area of at least *c.* 0.9ha (Plate 2.10), corresponding to a field formerly known as 'gravel pits' (Northamptonshire Archaeology 2007, 17). As the name

suggests, it is likely that they were mainly dug to extract gravel but the deeper pits will have reached the underlying limestone. Two machine-dug transects revealed that the pits were irregular in profile and that some were more than 1.4m deep.

The quarry pits L54 in the south-west covered an area of at least *c.* 0.1ha. Surface finds, including pottery and a pipe-clay wig curler (RA33), confirmed a post-medieval date and no further investigation took place.

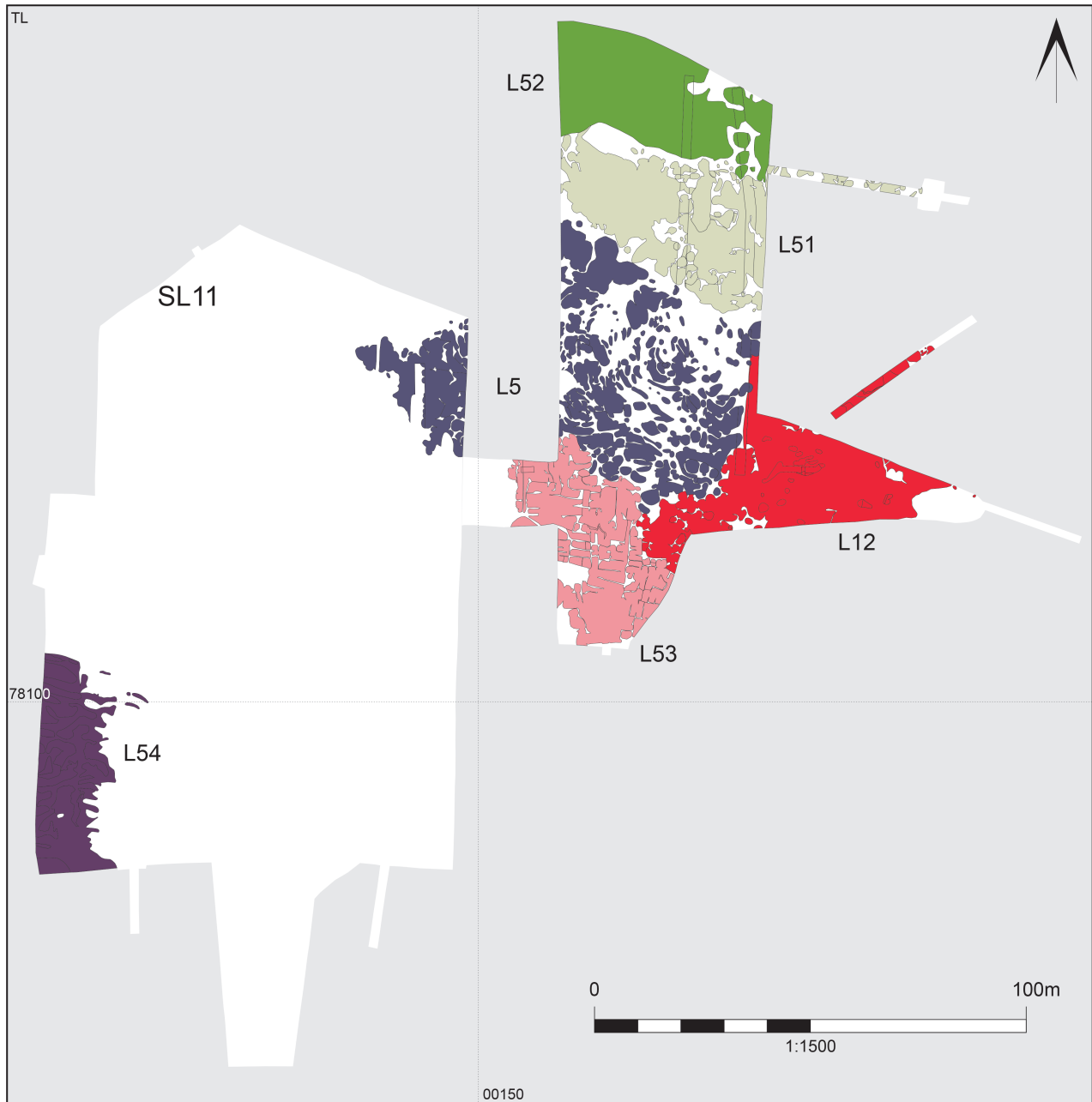


Figure 2.25: Overall plan of post-medieval (Phase 8) quarrying



Plate 2.10: Aerial view of post-medieval quarrying in north-east part of excavation area

Chapter 3

Artefacts

The excavation yielded an assemblage comprising pottery and other artefacts. Where appropriate, methodologies are outlined in each section below, with more detailed information provided in the appendices: pottery type series (Appendix I) and coin catalogue (Appendix II).

3.1 POTTERY

Jackie Wells

Introduction and methodology

Pottery was examined in accordance with PCRG/SGRP/MPRG guidelines (2016). The assemblage was quantified by minimum vessel and sherd count, weight, assigned forms and fabric groups, the latter detailed in Appendix I. Sherds belonging to the same vessel but deriving from separate contexts were quantified as one. Vessel attributes, including decoration, manufacturing techniques and levels of abrasion, together with evidence for use (modification, residues/sooting and wear) were recorded.

The disparate assemblage totals 564 sherds (9.7kg), the majority deriving from Iron Age and early Roman features assigned to Phases 3 and 4 (Table 3.1). The pottery spans a broad range of chronological periods – prehistoric, Roman, Anglo-Saxon and later, with several sherds occurring in features as either residual or intrusive finds. Table 3.2 quantifies the assemblage by sherd count, and chronologically by Phase, Site Landscape and Land-use Area.

Phase	Sherd no.	Wt. (g)	MSW*
2	123	1060	8.6
3	220	3642	16.5
4	166	4326	26.1
5	7	61	8.7
6	37	457	12.3
7	1	13	13
8	10	146	14.6
Total	564	9705	

MSW – mean sherd weight

Table 3.1: Pottery quantification by Phase

Prehistoric

The prehistoric assemblage totals 405 sherds (6.6kg; MSW 16g) representing a minimum of 149 hand-built vessels. The poor condition and largely undiagnostic nature of much of the prehistoric pottery has made the provision of specific dates for this material problematic, further hindered by the predominance of homogeneous and long-lived shelly fabrics. Wares, however, appear to be both contemporary with the Bronze Age ringwork (identifications supported by radiocarbon determinations) and of pre-Belgic Iron Age date. Ten wheel-thrown sherds from seven grog-tempered combed vessels, recovered mainly from Phase 4 deposits, are datable to the later Iron Age (transitional 1st century BC/AD).

Shelly wares are dominant and comprise a number of variants containing combinations of fine or coarse shell, sand or grog, reflecting the exploitation of local clay sources and outcrops. Shelly wares are highly abraded and leached, and some have flaky, degraded surfaces. Three flint-tempered sherds also occur. The range of fabric types is unsurprisingly comparable with those recovered from the evaluation (Chapman 2007, 13) and earlier investigations of the ringwork (Jackson 2001, 79.)

The assemblage is largely undiagnostic, apart from a fine-walled, early Iron Age, carinated vessel (Plate 3.1) with incised linear, curvilinear and dot decoration (from Phase 3 water-pits L10) (cf. Jackson 2001, fig. 5, 19, 21 and 23). Only a small proportion of rim or feature sherds occur, and no full profiles could be reconstructed. Rims are either upright rounded or flattened (three and four examples respectively). The exterior of one fine-walled vessel is burnished, and six coarse shelly vessels have lightly brushed/scored surfaces. The latter derive from Phase 3 (SL3) and 4 (SL5) deposits and suggest a middle Iron Age element.



Plate 3.1: Decorated Iron Age vessel from L10 water-pits

SL1 settlement features (Phase 2) yielded 123 sherds (1.06kg), the majority deriving from enclosure L2 (Plate 3.2). With the exception of 11 intrusive Roman coarse ware sherds (254g), most are indeterminate leached and



Plate 3.2: Roman pottery including a base from a Phase 4 feature

			Prehistoric							LIA	Roman						
Phase	SL	Land-use area	GR/QU	FL	SH/GR	SH	GR	QU	GR	SAM	OX	GW	RE	PKG	NVCC	SH	
2	1	2 Enclosure	29		32	44	2									9	
		11 Activity focus															
		19 Cremation cemetery				1											
		20 Activity focus				3											
3	3	3 Pond			2	12											
		8 Quarry pits			1	5		1	1			1					
		9 Quarry pits			2	9											
		10 Water-pits			63	25											
		13 Quarry pits		2		20											
		21 Water-pit			14	28											
		23 Quarry pit				22											
	4	7 Ringwork upper fills				11											
	4	5	22 Quarry pits				4					1	1				2
			24 Enclosure														
25 Quarry pits					6	44			7	2		2	1				
26 Enclosure						10				2		5		2		5	
27 Enclosure									1	1	1	1				1	
28 Trackway											1	5				1	
29 Quarry pits												10	7			10	
6		16 Ditch										2	2		2	6	
5	7	30 Buildings			1												
		31 Possible buildings		1	2												
	8	32 Activity focus															
6	9	35 SFB															
		36 SFB													1		
		37 SFB															
7	10	41 Field system															
8		5 Quarry pits				2											
		12 Quarry pits	1						1								
		53 Quarry pits															
Total			30	3	123	240	2	1	10	5	3	27	10	2	3	34	

See Appendix I for pottery fabric codes

Table 3.2: Pottery sherd count by Phase, Site Landscape and Land-use Area

abraded shell-tempered wares, likely to span the Bronze Age and Iron Age. Phase 3 features produced 220 sherds (3.6kg), most deriving from water-pits L10 and L21 (within settlement SL3).

Roman

Early Roman pottery totals 103 sherds (2.4kg), representing approximately 66 vessels (MSW 23g). Material is primarily local in character, dominated by a standard range of coarse wares in shell-, grog- and sand-tempered fabrics, including Midlands shelly wares and products of the Nene Valley industries. Forms are sparse, but typical of a domestic assemblage. They comprise jars of varying size and function with lid-seated or simple everted rims and a small number of plain-rimmed bowls, straight-sided dishes and grey ware beakers. Three of the latter have burnished acute lattice decoration; one coarse ware jar has a neck cordon reminiscent of the late 'Belgic' Iron Age tradition; and two grog-tempered jars display linear

combing. The base of a coarse ware jar has been modified with a post-firing drilled hole (diameter 30mm) through the centre. Five highly abraded central Gaulish samian sherds of undiagnostic form represent the only imported wares.

The Phase 4 assemblage totals 166 sherds (4.3kg) and derives mainly from enclosure system SL5, principally quarry pits L25 (2kg) and L29 (930g). Fifty-six percent of the assemblage (by sherd count) comprises Roman pottery, with Iron Age wares totalling the remainder. Mixed Iron Age and Roman assemblages were collected from enclosures L26, L27 and quarry pits L22 and L25, while the remaining features yielded solely Roman wares.

Anglo-Saxon

Thirty-nine sherds (490g: MSW 12g), representing 16 vessels are datable to the Anglo-Saxon period. Wares principally contain quartz, sandstone or oolites and are

WW	GR	Anglo-Saxon				Post-A-S		UNID	Total
		QU	SS	OL	QU/LI	PM/MOD			
1	1							1	118
									1
									1
									3
									14
									9
									11
									88
									22
									42
									22
								1	12
	1								8
									1
1									63
2	1							2	29
									5
	8							1	16
1	3					1			32
									12
		1	1						3
									3
			1						1
			14	3					17
		2	6						9
		3	6		2				11
						1			1
								1	3
									2
						5			5
5	14	6	28	3	2	7	6		564

hard-fired, undecorated and entirely reduced. No diagnostic forms occur – feature sherds are a flat-rounded base and a simple everted rim. Characteristic middle Anglo-Saxon types, such as Maxey or Ipswich wares, are absent, suggesting an earlier date for the assemblage.

Of the seven sherds (61g) collected from Phase 5 features, four are shell-tempered prehistoric wares (23g) occurring residually in settlement core SL7 deposits. They survive in extremely poor condition and cannot be more closely dated. Three Anglo-Saxon body sherds (38g) were associated with ground-level buildings in SL7 (L30 and L31) and activity focus SL8 (L32). A further 36 Anglo-Saxon sherds (452g) and a residual Roman Nene Valley colour-coated beaker rim sherd (5g) derived from the three Phase 6 possible SFBs SL9.

Post-Anglo-Saxon

Phase 7 furrows yielded a single abraded glazed jug sherd of Lyveden/Stanton 'B' ware (13g) datable to

the 13th–14th century. Phase 8 quarry pits produced ten abraded sherds (146g) of post-medieval (glazed red earthenware), 19th-century (Creamware), and residual Iron Age date.

3.2 OTHER ARTEFACTS

Jackie Wells

Introduction

Thirty-seven registered artefacts (RAs) were recovered by metal-detecting and hand excavation and from the residues of processed soil samples. Most are copper alloy, with a range of other materials comprising the remainder (Table 3.3). Bulk non-ceramic finds comprise fuel ash slag, ferrous slag and unmodified burnt stone. Some 77% of the assemblage derived from stratified deposits and cut features, with the remainder from topsoil/subsoil.

All finds are fully catalogued in the project archive and the coins (examined by Dr Peter Guest) are catalogued in Appendix II. Objects are generally of standard form, mainly representing personal items or artefacts associated with commerce, crafts and subsistence.

Material	Quantity
<i>Individual finds</i>	
Antler	1
Bone	2
Ceramic	5
Copper alloy	17
Flint	4
Iron	2
Lead alloy	3
Silver	2
Stone	1
<i>Bulk finds</i>	
Burnt stone	1584g
Ferrous slag	7500g
Fuel ash slag	29g

Table 3.3: Quantification of other artefacts by material

Date range

The earliest typologically datable finds are two Mesolithic/early Neolithic flint blade fragments and part of a later Neolithic flint knife. An incomplete copper alloy awl broadly dates to the Bronze Age. The later Bronze Age/Iron Age is represented by three partial ceramic loom weights and two bone points/gouges. A lower stone from a millstone grit rotary quern is likely to be of 'native', later Iron Age date.

Romano-British items are a copper alloy toilet spoon and five late 3rd- and early 4th-century coins. An annular ceramic loom weight is of Anglo-Saxon origin. The 12th to mid-15th centuries are represented by two silver coins, a copper alloy coin weight, and an ornate oval buckle. Two Charles I Rose farthings and a pipe-clay wig curler are post-medieval in date.

Provenance

Middle Bronze Age/early Iron Age (Phase 2)

The Phase 2 assemblage derived entirely from settlement SL1. Enclosure L2 ditches G9 and G16 respectively yielded two residual worked flints – a patinated, soft-hammer struck blade fragment and a knife. The latter is manufactured from a re-used patinated flake and has abrupt retouch on both the distal end and thicker lateral edge and semi-abrupt retouch on the opposing edge.

One of the possible two-post structures G21 contained a triangular ceramic loom weight of possible Iron Age date (RA30) with a partial transverse perforation. An indeterminate iron strip fragment (RA32: dimensions 25 × 19 × 2mm) was recovered from ditch G13. Activity focus L11 ditch G17 yielded a bone point or gouge (RA31: L103mm) formed from the right tibia of a sheep/goat. Wear/polish along the object suggests use as a weaving implement, similar to examples recovered from Iron Age settlements at Danebury, Hampshire (Cunliffe and Poole 1991, fig. 7.32) and Dragonby, Lincolnshire (Taylor and May 1996, 351). Unmodified heat-affected sandstone cobbles (931g) were associated with settlement SL1 enclosure L2 and activity focus L20.

Early/middle Iron Age (Phase 3)

Activity focus SL3 yielded a small finds assemblage. Pond L3 (G56) contained a complete bone point/gouge (RA24: length 88mm) made from a cattle left metacarpal. The object is larger than the Phase 2 example (RA31), although would have served a similar purpose.

L8 quarry pit G54 contained a residual patinated tertiary flint blade fragment and a circular copper alloy domed stud with integral rivet (RA10). The latter is not closely datable; such studs are more commonly recovered from Roman and later deposits, although a broadly similar example is known from the middle Iron Age settlement at Gussage All Saints, Dorset (Wainwright 1979, 110 no. 3019).

Storage pit G102 (L9) yielded a residual Bronze Age copper alloy awl (RA9). The object has a chisel-ended tang and a marked expansion at the transition point, with faceting on one side of the transition. It appears to have been broken in antiquity and the end modified or reworked by flattening into a short chisel-shape. RA9 may be a modified Thomas Group 3 awl, a form known to occur throughout the Bronze Age (Woodward and Hunter 2015, 89), although it cannot be positively classified.

A ceramic loom weight fragment (RA34) was recovered from L21 water-pit G36; too little of the object survives to be certain of its form. Unmodified heat-affected sandstone cobbles (438g) derived from quarry and storage pits (L8, L9, L13) and water-pit L10.

Late Iron Age/early Roman (Phase 4)

A small and disparate assemblage derived from enclosure SL5 and dispersed activity SL6. Quarry pits L25 produced a red deer antler off-cut, comprising a sawn and thinned portion of stem, tine and base (RA29), and unmodified heat-affected sandstone cobbles (215g). A residual later Neolithic invasively retouched flint knife (RA26) and a negligible quantity of fuel ash slag (30g), residue from a high-temperature fire, were recovered from quarry pits L29.

The ditches of trackway L28 yielded an undatable cast copper alloy annular ring of angular D-shape (RA20:

diameter 22.7mm) and indeterminate function, and the lower stone of a Millstone Grit rotary quern with non-penetrating spindle hole (RA27), likely to be of 'native' later Iron Age date. The presence of this non-local stone indicates access to traded goods from the Pennines.

Ditch L16 (SL6) yielded a Roman copper alloy coin (RA23) of Constantine II and an iron ox goad (RA28), the latter well attested from Romano-British sites.

Early Anglo-Saxon (Phases 5 and 6)

A furnace bottom or slag cake of ferrous smelting slag (7.5kg) was recovered from pit G24 (L32, SL8, Phase 5). This derived from a non-tapping furnace or slag pit furnace, where slag ran into a pit underneath the furnace structure, allowing the furnace superstructure to be subsequently repositioned over a new pit when necessary. This method of smelting is known in Britain from the Anglo-Saxon period (Bayley *et al.* 2015, 22).

One of the postholes of ground-level building G82 (L31, SL7 Phase 5) contained a residual ceramic loom weight fragment with a single transverse hole near the apex (RA15), representing either part of an Iron Age triangular or possibly truncated late Bronze Age/early Iron Age pyramidal-shaped weight. A complete early–middle Anglo-Saxon ceramic loom weight (RA25; Plate 3.3) of annular form (after Dunning *et al.* 1959, 23) was recovered from pit G119 within possible SFB G118 (L36, SL9 Phase 6).



Plate 3.3: Early–middle Anglo-Saxon ceramic loom weight (RA25)

Medieval (Phase 7) post-medieval (Phase 8)

A copper alloy Charles I Rose farthing (RA19: dated 1625–49) derived from Phase 7 furrows L41. Post-medieval quarry pits L5, L51, L52 and L54 (Phase 8) yielded a residual Roman copper alloy toilet spoon (RA22; Plate 3.4) and a Roman coin (RA1). A pipe-clay wig curler (RA33; Plate 3.5) dates to c. 1690–1800. A small drum-shaped lead disc (RA2: diameter 10mm), with a groove around the circumference of the edge and a perforation running lengthwise through the thickness of the disc, may represent a bag seal of either Roman or post-medieval date.

Topsoil/subsoil L56

Metal-detected Roman and post-Roman finds include four copper alloy (RAs 7, 8, 16, 18) and two silver coins (RAs 6, 13). One 4th-century coin (RA16) is perforated, suggesting possible re-use as a pendant during the Anglo-Saxon period. Two copper alloy buckles (RA12, RA21)

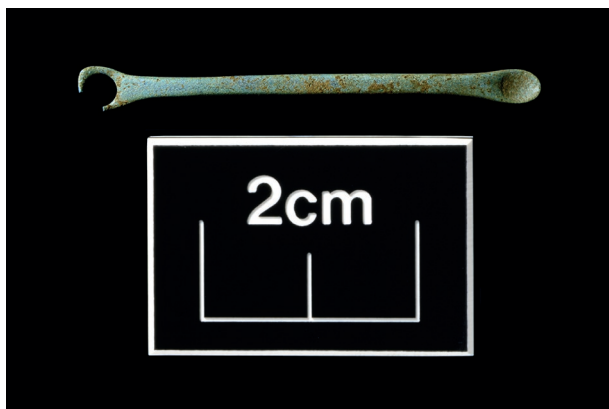


Plate 3.4: Roman copper alloy toilet spoon (RA22)

and a coin weight (RA14) were also recovered. Oval buckle RA12 has an ornate outside edge and represents a form that was in use from the late 12th to the late 14th century (Egan and Pritchard 1991, 76). RA21 has a thin, sub-rectangular/D-shaped frame, originally gilded, and is of post-medieval date. The English copper alloy coin



Plate 3.5: Post-medieval pipe-clay wig curler (RA33)

weight is for the *ecu au soleil* and dates to c. 1475–1550. The damaged disc-shaped uniface weight bears a sun in a shield with crown above and is paralleled in the Portable Antiquities Scheme Database by an example from Wiltshire (ID: SUR-C55F3A).

Chapter 4

Ecofacts

The excavation yielded an ecofactual assemblage comprising animal bone, charred and waterlogged plant remains, charcoal, and human remains. Where appropriate, methods are outlined in each section below. For a small number of samples, the volume of soil available for processing was reduced due to the loss of material during a road traffic accident; as necessary, these are indicated on the relevant tables.

4.1 ANIMAL BONE

Mark Maltby

Introduction and methods

All the bones and teeth recovered from the excavations by hand and the sieved samples were recorded individually onto a relational database (Microsoft Access). In the main database table the following data were recorded where appropriate for each specimen: species; anatomical element; zones of bone present; approximate percentage of bone present; gnawing damage; erosion; weathering; burning (charred and calcified); fusion data; sieved sample number; other comments including observations of pathology and further details about identification. Separate tables linked to the main table by an individual identification number were created for metrical, butchery and tooth ageing data. Tooth eruption and wear descriptions for cattle, sheep/goat and pig follow the method of Grant (1982). All measurements followed those described by von den Driesch (1976). All fragments, including loose teeth, shaft fragments, rib heads and vertebrae were recorded to species level where possible.

Bone preservation and overall sample size

Animal bones were recovered from 93 contexts, providing a total of 551 individual specimens (NISP), of which 274 were identified to species. Sieved samples provided 170 of the recorded fragments but only 20 of these were identified elements and the remainder were teeth and bone of unidentified mammals (Tables 4.1–4.3).

The assemblages from each context were assigned to one of five potential preservation grades. No assemblage was assigned to the highest grade (excellent preservation) whereas 19 (20%) were graded as good, containing bones with good surface preservation and relatively little gnawing, weathering or other damage. Fifty-four (58%) contexts produced moderately preserved assemblages. These generally contained bones that had quite good surface preservation but were much more fragmentary

Phase	Excellent	Good	Moderate	Quite poor	Very poor	Total
2	–	2	10	6	1	19
3	–	11	21	2	–	34
4	–	4	9	3	2	18
5	–	1	10	4	1	16
6	–	1	2	–	–	3
7	–	–	1	–	–	1
8	–	–	–	1	–	1
Total	0	19	54	16	4	93

Table 4.1: Animal bone preservation by context

Phase	Excellent	Good	Moderate	Quite poor	Very poor	Total
2	–	2	22	29	5	58
3	–	194	192	2	–	388
4	–	18	21	7	10	56
5	–	2	12	10	5	29
6	–	5	9	–	–	14
7	–	–	1	–	–	1
8	–	–	–	1	–	1
Total	0	221	261	49	20	551

NISP = number of individual specimens

Table 4.2: Animal bone preservation by NISP

Phase	2	3	4	5	6	7	8	Total	Sieved
Cattle	16	127	19	3	11	1	1	180	6
Sheep/goat	3	32	7	3	–	–	–	45	11
Pig	3	18	–	–	–	–	–	21	1
Horse	–	13	2	–	–	–	–	15	–
Dog	–	2	–	–	–	–	–	2	–
Red deer	–	5	–	–	–	–	–	6	–
Total mammal	22	197	28	6	11	1	1	269	18
Chicken	–	–	2	–	–	–	–	2	–
Goose	–	1	–	–	–	–	–	1	–
Total bird	0	1	2	0	0	0	0	3	–
Rodent	1	–	–	1	–	–	–	2	2
Total small	1	0	0	1	0	0	0	2	2
Total identified	23	198	30	7	11	1	1	274	20
Unid. mammal	35	190	26	22	3	–	–	277	150
Total	58	388	56	29	14	1	1	551	170
Sheep	1	1	1	–	–	–	–	3	
Goat	–	–	–	–	–	–	–	0	

Counts are of numbers of individual specimens (NISP).

Total includes bones from sieved samples.

Table 4.3: Animal bone species counts by phase

and included more bones damaged by weathering. Sixteen (17%) assemblages were assigned to the quite poorly preserved category, which included more weathered and burnt specimens. Only four (4%) assemblages were very poorly preserved, consisting entirely of either heavily eroded or burnt bones (Table 4.1). Taking account of the sizes of the assemblages: 221 fragments (40%) came from deposits whose assemblages were graded as good; 261 fragments (47%) were from those graded as moderately preserved; and 69 fragments (13%) were from quite poorly or very poorly preserved assemblages (Table 4.2). A total of 61 fragments (11%) were burnt, including two of sheep/goat and one of cattle. All but five of the burnt fragments were retrieved from sieved samples. Amongst the identified elements, 61 (22%) were recorded as weathered. Canid gnawing damage was observed on 31 cattle, three sheep/goat, one pig and three horse bones, forming 14% of the identified assemblage. Many more bones, particularly those of the smaller species, would have been completely destroyed. Processing marks were only observed on eight cattle and two pig bones, and on a red deer antler. Many of the bones had modern breaks. Those fragments that could be refitted were recorded as a single element.

Results

Middle Bronze Age/early Iron Age (Phase 2)

A total of 58 fragments were recorded, many of which were weathered. Most (16) of the identified elements belonged to cattle. Sheep/goat (3), pig (3) and rodent were also represented (Table 4.3). The cattle elements included a scapula of a young calf from enclosure L2 along with a portion of three humeri (Table 4.4). Two substantial portions of sheep/goat mandibles belonged to immature sheep probably slaughtered between six and 12 months of age (Table 4.5). The rodent element consisted of an incisor of a small vole or mouse.

	Phase							NISP
	2	3	4	5	6	7	8	Total
Horn core	–	2	1	–	1	–	–	5
Maxilla	–	3	–	2	–	–	–	5
Skull	–	2	–	–	–	–	–	2
Mandible	–	22	3	1	2	–	1	29
Loose Teeth	4	6	2	–	–	1	–	13
Scapula	1	6	1	–	1	–	–	10
Humerus	3	8	–	–	2	–	–	13
Radius	2	9	2	–	–	–	–	13
Ulna	1	5	1	–	1	–	–	8
Pelvis	–	7	1	–	1	–	–	9
Femur	1	10	1	–	–	–	–	12
Patella	1	–	–	–	–	–	–	1
Tibia	–	15	3	–	2	–	–	20
Astragalus	1	1	–	–	–	–	–	2
Calcaneus	–	1	–	–	–	–	–	1
Metacarpal	–	6	2	–	–	–	–	8
Metatarsal	2	12	1	–	1	–	–	16
Metpodial	–	1	–	–	–	–	–	1
Phalanx 1	–	3	–	–	–	–	–	3
Phalanx 2	–	1	1	–	–	–	–	2
Phalanx 3	–	1	–	–	–	–	–	1
Atlas (VC1)	–	2	–	–	–	–	–	2
Thoracic V	–	2	–	–	–	–	–	2
Lumbar V	–	1	–	–	–	–	–	1
Ribs	–	1	–	–	–	–	–	1
Total	16	127	19	3	11	1	1	180

NISP = number of identified specimens

Table 4.4: Cattle element counts (NISP)

Early/middle Iron Age (Phase 3)

This phase produced the largest animal bone assemblage – 388 fragments, including 198 identified elements (Table 4.3). Although still modest in size, the sample was sufficiently large to undertake some intra-site analysis.

Pond L3 (SL3) provided only five elements that consisted of a sheep/goat tooth, two cattle tibia fragments, a fairly complete pig radius and a fragment of red deer antler, which showed evidence of working in the form of fine knife cuts.

The Iron Age deposits in the upper fill of the ringwork ditch and adjacent pits (SL4) produced 45 fragments, including 15 of unidentified mammal. The 19 cattle elements included a largely complete radius bearing fine disarticulation cuts on the medial aspect of the proximal end. Four fragments of cattle tibia included two from immature animals. Pig was the second most common species. The six elements included parts of a probable pair of scapulae and a pelvis that had a cut on the shaft of the ilium. Three pig mandible fragments included a pair from an adult male and a third from another male. Four elements of sheep/goat and one of horse completed the assemblage.

	Phase			
Cattle	3	4	6	Total
Stage 2	–	1	–	1
Stage 3-4	3	–	–	3
Stage 4	3	–	1	4
Stage 5	1	–	–	1
Stage 6	1	–	–	1
Stage 6-7	2	–	–	2
Stage 7	3	–	1	4
Total	13	1	2	16
Sheep/goat	2	3	–	Total
Stage 3	2	–	–	2
Stage 5	–	1	–	1
Total	2	1	–	3

Stage 1 = 4th deciduous premolars (dp4) not in wear

Stage 2 = dp4 in wear; 1st molar (M1) not in wear

Stage 3 = M1 in wear; 2nd molar (M2) not in wear

Stage 4 = M2 in wear; 3rd molar (M3) and permanent premolars not in wear

Stage 5 = M3 in wear; 4th permanent premolar (P4) not in wear (Cattle)

Stage 5 = M3 in wear; M1 at Grant (1982) wear stage g (S/G)

Stage 6 = P4 in wear; M3 < Grant wear stage k (Cattle)

Stage 6 = M1 at Grant wear stages h-m; M2 at Grant wear stage g (S/G)

Stage 7 = M3 at Grant wear stages k-m (Cattle)

Stage 7 = M1 and M2 at Grant wear stages h-m (S/G)

Table 4.5: Cattle and sheep/goat mandibular tooth and epiphyseal aging data

The 24 bone fragments from quarry pits L8 (SL3) included 13 identified elements. Eleven belonged to cattle including five tibia fragments and the diastema of a mandible that had cuts on the inner (lingual) surface. A mandible of a large adult dog and an eroded fragment of red deer antler were also identified.

Storage pits L9 (SL3) produced only four elements, including two of cattle and one of sheep/goat. The three water-pits L10 (SL3) produced the largest and best-preserved bone assemblage from the excavation. They provided a combined total of 131 fragments, of which 79 were identified. These were dominated by cattle (52), whose elements included 11 mandible fragments from at least seven jaws. Four of the five humerus fragments had evidence of cut marks near the distal end. Other cattle elements included five femur fragments, a complete tibia and a complete radius of adult cattle and a metacarpal from a neonatal calf. The ten pig elements included a complete radius and metacarpal of adult animals and a split thoracic vertebra of a younger pig. The nine horse elements included a complete metatarsal along with substantial portions of three humeri and a pair of pelves. Sheep/goat was only represented by parts of two radii and substantial portions of a metacarpal and metatarsal. Substantial portions of three red deer antlers were found in two of the pits. One of the antlers was unshed, with small portions of the skull still attached. All the antlers had suffered from modern breakage and conclusive evidence for working was not found. A mandible of an adult dog was also recovered.

Storage pits L13 (SL3) provided a total of 107 fragments but 80 of these, mainly from sieved samples, were unidentified. In contrast to water-pits L10, sheep/goat elements (17) were the most commonly identified. These included five loose teeth and four radius fragments. The nine cattle elements included a fairly complete radius and

ulna, and a pelvis with a knife cut on the ischium. An ulna of a goose was also identified.

The 51 fragments from water-pit G36 (L21, SL3) were quite well preserved but more fragmented than those from water-pits L10. The bones included 27 identified elements, mostly from cattle (21). Mandibles (6) were again the most common cattle element. A largely complete immature cattle radius may have been associated with an ulna and humerus from the same limb. Three elements of sheep/goat, the fronts of a pair of horse mandibles, and a pig tooth completed the assemblage.

Quarry pits L23 (SL3) produced 21 fragments, including 11 of cattle, two of sheep/goat, and one of horse. The cattle elements included three metatarsals, two of which were substantially complete.

Late Iron Age/early Roman (Phase 4)

A total of 56 fragments were recorded. As in previous phases, most (19) of the 30 identified elements belonged to cattle. Sheep/goat (7), horse (2) and chicken (2) were also represented (Table 4.3). The cattle elements (Table 4.4) included a fairly complete right radius and ulna of a sub-adult animal. A metacarpal from the same water-pit F269 (L27) could have belonged to the same limb. The greatest length of the metacarpal (198mm) provided an estimated withers height (von den Driesch and Boessneck 1974) of 116.3cm. A comparison of the distal breadth (51.8mm) with the greatest length indicated that this was a slender bone that probably belonged to a female. The radius was slightly larger (greatest proximal breadth = 73.6mm) than the four measured specimens from Phase 3 (Table 4.6). A cattle pelvis from the same pit bore a deep blade mark on the sacro-iliac joint surface made where the pelvis had been separated from the base of the spine. One mandible, in which the first molar had only just erupted, belonged to a calf of around 4–6 months of age. Another calf mandible bore fine vertical knife cuts on the lingual aspect of the tooth row. The sheep/goat elements included part of a ram's horn core (Table 4.7). One of the two horse metatarsals was complete with a distal breadth of 49.7mm and a greatest length of 272mm, which converted into an estimated withers height (Vitt 1952) of 142.5cm (14 hands). The distal breadth of the second metatarsal measured 48.3mm. Both horses were quite large by Romano-British standards. A chicken femur and tibiotarsus were found in ditch G136 (L16,

		Measurements (mm)			
		Phase 3		1997 ringwork excavation	
Horn core GBD	36.5	70.0			
Astragalus GLI	59.0				
Calcaneus GL	114.0				
Humerus BT	63.4	63.7	69.1	69.8	55.1 59.7 64.7 65.0
Metatarsal Bp	39.2	41.3	50.0		
Radius Bp	68.3	71.2	72.1		
Radius BFp	63.7	65.0	66.1		
Tibia Bd	52.7	55.6	61.9		

All measurements follow von den Driesch (1976).

GBD = greatest basal diameter

GLI = greatest length lateral

GL = greatest length

BT = breadth of trochlea

Bp = greatest proximal breadth

Bd = greatest distal breadth

BFp = proximal articular breadth

Table 4.6: Common measurements of cattle from Phase 3 and 1997 ringwork excavation

	Phase				NISP Total
	2	3	4	5	
Horn core	–	1	2	–	3
Maxilla	–	2	–	–	2
Skull	–	–	1	–	1
Mandible	2	1	–	–	3
Loose teeth	–	8	–	–	8
Scapula	–	1	–	–	1
Humerus	–	1	1	1	3
Radius	–	6	–	–	6
Ulna	–	1	–	–	1
Tibia	1	5	3	1	10
Calcaneus	–	–	–	1	1
Metacarpal	–	2	–	–	2
Metatarsal	–	3	–	–	3
Phalanx 1	–	1	–	–	1
Total	3	32	7	3	45

NISP = number of identified specimens

Table 4.7: Sheep/goat element counts

SL6). Chickens were introduced into England during the Iron Age but tend to be found only in small numbers, if at all, on Roman rural sites (Maltby *et al.* 2018). Neither bone had evidence of medullary bone, which indicated that the birds were not hens in lay.

Early Anglo-Saxon (Phase 5) ground-level buildings

Some 29 animal bone fragments were recovered but only seven were identified: cattle (3), sheep/goat (3) and rodent. Two maxillae both belonged to adult cattle (Tables 4.3, 4.4 and 4.7).

Early Anglo-Saxon (Phase 6) SFBs

Fourteen animal bone fragments were recovered and the 11 identified elements all belonged to cattle (Tables 4.3 and 4.4). These included a complete horn core and the adjoining portion of the skull which remained attached when the horn was removed. The animal had short horns with an outer curvature length of 115mm. A fairly complete cattle mandible belonged to a very old animal (Grant 1982; MWS = 52), which must have served as a breeding or working animal for a very long period. A second mandible belonged to a sub-adult (MWS = 19) probably killed in its second year (Jones and Sadler 2012).

Medieval (Phase 7)

A cattle tooth was the only element recovered from this phase.

Post-medieval (Phase 8)

A cattle mandible was the only element recovered from this phase. It belonged to an immature animal.

Discussion of the early/middle Iron Age (Phase 3) assemblage

Only the Phase 3 animal bone was of sufficient quantity and preservation to warrant further discussion. The intra-site analysis showed quite a lot of variation in species representation, although cattle provided 64% of the identified mammal elements overall (Table 4.3). Cattle are usually well-represented on Iron Age sites from Northamptonshire but this is an unusually high percentage. Previous excavations produced 237 identified mammal bones, of which only 43% belonged to cattle (Hamilton-Dyer 2001). Cattle also provided

between 40% and 43% of the mammal assemblage from Iron Age features at Station Road, Higham Ferrers and Bourton Way, Wellingborough (Maltby 2020, 71). Generally, cattle have tended to be found in roughly equal numbers to sheep/goat on Iron Age sites from Northamptonshire, although occasionally cattle elements have formed over half of the mammal assemblage, for example at Biddlesden Road Bridge, Northampton, where they formed 60% of the assemblage (Deighton 2007). However, that assemblage consisted of fewer than 200 identified elements and the samples from both Thrapston and Biddlesden Road are too small to be confident that there was a significantly greater emphasis on cattle exploitation at these settlements. The assemblage from the excavation reported on here is also largely based on material obtained from water-pits (L10 and L21) where deposition of large bones may have been favoured and atypical of normal deposition practices.

Mandibles were the most common cattle elements represented, providing 17% of their assemblage (Table 4.4). At least nine different jaws were represented. Fifteen fragments of tibia came from at least six bones and 12 metatarsal fragments came from at least five. At least seven bones were represented by nine radius and eight humerus fragments. All parts of the body were represented and it is likely that most of the cattle were slaughtered on site. Butchery marks – all knife cuts – were observed on six cattle bones. Those found on four distal humeri and a proximal radius were made during the disarticulation of that joint by cutting through the ligaments in a manner commonly encountered in later prehistoric assemblages in Britain. Similar marks were found on specimens from Station Road, Higham Ferrers and Bourton Way, Wellingborough (Maltby 2020, 76–77).

Tooth ageing data was recorded from 13 cattle mandibles, eight of which came from the L10 water-pits. Immature, sub-adult, young and old adult cattle were all represented (Table 4.5). Although several mandibles belonged to cattle probably slaughtered in their second to fourth years (Stages 4–5), six of the mandibles had all their permanent teeth in wear (Stages 6–7) and five of the ten latest-fusing limb bone epiphyses had fully fused, indicating that over half the cattle represented were probably over four years old. The oldest animals would have served as breeding stock and possibly as working animals or providers of milk for several years prior to slaughter. One mandible had a mandible wear stage (MWS) of at least 54 (Grant 1982), which was from a very elderly animal. However, there was little evidence for the slaughter of calves, which suggests that dairy production was not a high priority. Only one of 19 early-fusing limb bone epiphyses had not fused, indicating few cattle died in their first year. In addition, only five porous fragments from young calves were recorded. However, two of these were from neonatal mortalities, from which it can be inferred that some cattle were being bred at the site.

There were very few measurable cattle bones (Table 4.6) and none of the bones was sufficiently complete to provide withers height estimates. Two bones from the previous excavations of the ringwork provided estimates of 102cm and 124cm (Hamilton-Dyer 2001), which lie towards either end of the heights of cattle encountered on later prehistoric sites in the region (Maltby 2020; 2021). Breadth measurements of various limb bones from

both excavations also fell within the range of Iron Age specimens from the region, with the largest specimens probably mainly belonging to males.

Sheep/goat provided only 16% of the identified mammal elements (Table 4.3). As noted above, this is a very low percentage compared to most Iron Age assemblages from the region, in which sheep/goat have usually contributed over 35% of the total elements (Maltby 2003; 2021). However, sheep/goat provided only 20% of the assemblage from Biddlesden Road Bridge, Northampton, which was dominated by cattle (Deighton 2007). They also formed only 21% of the bones from the previous excavations of the ringwork at Thrapston (Hamilton-Dyer 2001). Only one of the sheep/goat elements was positively identified as sheep whereas none was recorded as goat. Bones of goats as well as sheep, however, were previously recovered from the ringwork (Hamilton-Dyer 2001).

A quarter of the sheep/elements consisted of loose teeth. A high percentage of loose teeth is a good indicator that sheep/goat bones did not survive as well as those of cattle. The remaining assemblage was also biased towards sturdier elements, such as the radius and tibia (Table 4.7). At least four radii were represented. No butchery marks were recorded on sheep/goat bones. Only one mandible provided ageing data and this belonged to a young adult (Table 4.5).

Although pig provided only 9% of the identified mammal fragments (Table 4.3), they did outnumber sheep/goat in the Iron Age deposits from ringwork and water-pits L10. They also outnumbered sheep/goat in the previous excavations of the ringwork, providing 22% of the identified assemblage (Hamilton-Dyer 2001). The two ageable mandibles from L7 both belonged to boars probably slaughtered in their second year. Generally, pig elements have formed less than 10% of Iron Age assemblages from recent excavations in Northamptonshire, although this figure was higher (16%) at Station Road, Higham Ferrers (Maltby 2020, 72). All parts of the body were represented (Table 4.8). Very few bones could be measured, although a complete fourth metacarpal had a greatest length of 70.8mm. This and all the other pig bones fell within the size range of domestic pigs rather than wild boar. A thoracic vertebra had been chopped in half during the splitting of the carcass into sides. Fine knife cuts associated with dismemberment were also observed on a pelvis.

Horse provided only 7% of the Phase 3 assemblage (Table 4.3), which is fairly typical of their representation on Iron Age sites in the region (Maltby 2020) and

	Phase		NISP
	2	3	Total
Skull	–	1	1
Mandible	–	3	3
Loose teeth	1	4	5
Scapula	–	3	3
Radius	–	2	2
Ulna	–	1	1
Pelvis	–	1	1
Tibia	2	1	3
Metacarpal	–	1	1
Thoracic V	–	1	1
Total	3	18	21

NISP = number of identified specimens

Table 4.8: Pig element counts (NISP)

their abundance was slightly higher than encountered in the previous ringwork excavations (4%) (Hamilton-Dyer 2001). All areas of the body were represented (Table 4.9) but no butchery marks were observed and horse bones were generally less fragmented than those of cattle. A metatarsal had a greatest length of 257mm, providing a withers height estimate (Vitt 1952) of 134.6cm (13.2 hands). Large ponies of similar size were found at Station Road, Higham Ferrers and Bourton Way, Wellingborough (Maltby 2020, 82) but all these specimens were larger than two metatarsals previously found in the ringwork, which came from horses measuring only 102cm and 125cm at the shoulder (Hamilton-Dyer 2001). The only ageable mandible belonged to an adult. Cheek tooth height measurements (Levine 1982) indicated that it died around 11–13 years old, presumably after it have served as a working animal. Only two mandibles of dog were recovered, although their presence is also attested by the substantial number of bones damaged by canid gnawing.

Four contexts produced five fragments of red deer antler, including some substantial portions from water-pits L10. Several antlers were also recovered from the previous excavation of the ringwork including one which had served as a pick and two which had been placed together in the ditch (Hamilton-Dyer 2001). At least one of the antlers from the current excavations showed evidence of working. However, although excavations at Thrapston have produced more antlers than usually encountered in later prehistoric assemblages from the region, there was no evidence for the consumption of venison or the meat or any other wild mammals. Bones of wild species rarely form significant portions of Iron Age assemblages in the region (Maltby 2020, 72–75). The only bird bone belonged to a wild goose and there were no finds of fish bones despite the extensive sieving programme.

	Phase		NISP
	3	4	Total
Mandible	3	–	3
Humerus	3	–	3
Pelvis	3	–	3
Femur	1	–	1
Metatarsal	1	2	3
Lateral Mp	1	–	1
Cervical V	1	–	1
Total	13	2	15

NISP = number of identified specimens

Table 4.9: Horse element counts (NISP)

4.2 CHARRED AND WATERLOGGED PLANT REMAINS

John Giorgi

Introduction and methods

In total, 72 samples from a range of features and likely chronological periods were taken for the recovery of charred (primarily) and waterlogged plant remains. Their volumes ranged from 1–30 litres, although most (notably the cremation burial fills) were 10 litres or less. The samples were processed for charred plant remains using a Siraf-style flotation tank with meshes of 0.3mm and 1mm for the recovery of the flots and residue respectively. Assessment demonstrated that 40 samples merited analysis. Approximately half of these derived from the middle Bronze Age/early Iron Age (Phase 2)

cremation burials (Table 4.10). In addition, six samples from water-pits and a pond were taken for the recovery of waterlogged plant remains; they were processed using sieve sizes of 0.25mm and 0.5mm for the flots and residue respectively. Only two samples from early/middle Iron Age (Phase 3) pond G56 (L3) contained remains suitable for analysis.

Any charred plant remains were sorted from the dried flots and quantified, with the exception of very small (<1mm) grain fragments and charcoal and indeterminate items, estimates of which were made using the following scale: + = 1–10; ++ = 11–50; +++ = 51–150; ++++ = 151–250; +++++ = >250 items. The waterlogged plant remains were not sorted from the flots but the estimated frequencies of individual species were recorded during scanning of the wet flots using the same scale. The plant remains were identified using a binocular microscope (with a magnification of up to ×40) together with modern and charred reference material and reference manuals (Cappers *et al.* 2006; Jacomet 2006). Tables 4.10–4.13 present the results. Taxonomic order for the wild plants follows Stace (2005), also used for ecological data along with Hanf (1983), Ellenberg (1988) and Wilson and King (2003).

Results

Middle Bronze Age/early Iron Age (Phase 2) settlement SL1

Of the 45 middle Bronze Age/early Iron Age samples taken on site, 26 produced identifiable charred plant remains (Tables 4.10 and 4.11).

Cremation burials (L2, L19)

The 22 samples produced variable amounts of charred plant remains. The richest assemblages were from three graves within cluster G25 (F407, F412 and F953) in enclosure L2, and from grave F524 in the southern part of cremation cemetery L19. The bulk of the identifiable remains consisted of burnt tuber, roots and rhizome fragments (in 19 samples); some of the tubers in 15 samples were identified as *Arrhenatherum elatius* var *bulbosum* (onion couch). Other charred plant remains included occasional wild plant/weed seeds in 14 samples and a little cereal debris in six.

Tubers, including those of *Arrhenatherum elatius* var *bulbosum*, are often found together with roots and rhizomes in cremation deposits, for example in Neolithic and Bronze Age cremation burials at Raunds, a few kilometres to the south of Thrapston (Campbell 2007, 30) and in late Neolithic/early Bronze Age cremation deposits at Earls Barton further to the south-west (Giorgi 2018).

The tubers and rhizome fragments may represent the gathering by uprooting of wild vegetation for use as

Phase	Ditch	Grave	Posthole	Storage pit	Water-pit	Quarry pit	Other pit	Total
2	1	22	1	–	–	–	2	26
3	1	–	–	1	2	1	–	5
4	1	–	–	–	–	2	–	3
5	–	–	5	–	–	–	1	6
Total	3	22	6	1	2	3	3	40

Table 4.10: Analysed samples for charred plant remains by feature type and phase

Land-use area		2											
Group	159	Grave 407				Grave 412				Grave 953			
Feature type	Pit	8	9	10	11	13	14	15	16	39	50	70	Grave 1293
feature number	1436	7.5	10	7.5	7.5	2.5	5	5	2.5	60	10	2	1303
sample number	80	31	98	68	56	1	1	4	2	<1	1	2	77
vol processed soil (litres)	5												1
vol flint (ml)	24												53
Cereal grains													
<i>Triticum dicoccum/spelta</i>	3	-	-	-	-	-	-	-	-	-	-	-	-
<i>T. cf. dicoccum/spelta</i>	2	-	-	-	-	-	-	-	-	-	-	-	-
<i>Triticum</i> spp.	2	-	-	-	-	-	-	-	-	-	-	-	-
cf. <i>Triticum</i> sp.	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Hordeum vulgare</i> L.	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>H. vulgare</i> L.	-	-	-	-	-	-	-	-	-	-	-	-	-
cf. <i>H. vulgare</i>	-	-	-	-	-	-	-	1	-	-	-	-	-
cf. <i>Avena</i> sp.	1	-	-	-	-	-	-	-	-	-	-	-	-
Cerealia	14	-	-	-	-	-	-	-	-	-	-	-	-
Cerealia	+	-	-	-	-	-	-	-	-	+	-	-	-
Cereal chaff													
<i>Triticum dicoccum</i> Schubl.	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>T. spelta</i> L.	2	-	-	-	-	-	-	-	-	-	-	-	-
<i>T. spelta</i> L.	1	-	-	-	-	-	-	-	-	-	-	-	-
<i>Triticum</i> sp(p).	2	-	-	-	-	-	-	-	-	-	-	-	-
Other plant/weed seeds	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Ranunculus</i> sp.	-	-	-	-	1	-	-	-	-	-	-	-	-
<i>Corylus avellana</i> L.	-	-	-	-	-	1	-	-	-	-	-	1	-
<i>Persicaria</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Polygonaceae indet	-	-	-	-	-	-	-	-	-	-	-	1	-
<i>Prunus spinosa</i> L.	-	2	-	-	-	-	-	-	-	-	-	-	-
<i>Vicia/Lathyrus</i> sp.	-	1	-	-	-	-	-	-	-	-	-	-	-
<i>Vicia/Lathyrus/Pisum</i> sp.	-	-	1	-	-	-	-	-	-	-	-	-	-
<i>Medicago/Trifolium</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-
cf <i>Plantago lanceolata</i>	-	-	1	-	-	-	-	-	-	-	-	-	-
<i>Galium aparine</i> L.	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Galium</i> sp.	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Arrhenatherum elatius</i> var <i>bulbosum</i> (Willd.) St-Amans	-	5	17	21	12	13	15	51	25	4	1	-	-
Poaceae indet.	-	-	-	-	-	-	-	-	-	-	1	-	-
Poaceae indet.	-	-	-	-	-	-	-	-	-	-	-	1	-
indeterminate	-	19	72	88	48	18	28	24	12	41	32	7	10
indeterminate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
wood charcoal (>/<2mm)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
Total	29	27	91	109	61	32	43	76	37	45	35	9	11
Item density (per litre of processed soil)	5.8	3.6	9.1	14.5	8.1	12.8	8.6	15.2	14.8	0.8	3.5	4.5	1.1

Table 4.1.1: Charred plant remains from Phase 2 settlement SL1

Land-use area		11	19			49			20		
Group	Feature type	17	48			921			68		
	sample number	1136	930			924			1038		
	vol processed soil (litres)	61	41	40	34	33	46	37	51	32	160
	vol flot (ml)	7	7	5	7	7	10	6	20	10	609
		1	1	9	1	16	18	11	<1	<1	25
											30
											167
Cereal grains											
<i>Triticum dicoccum/spelta</i>	emmer/spelt wheat	-	-	-	-	-	-	-	-	-	-
<i>T. cf. dicoccum/spelta</i>	?emmer/spelt wheat	-	-	-	-	-	-	-	-	-	-
<i>Triticum</i> spp.	wheat	-	-	-	-	-	-	-	-	-	-
cf. <i>Triticum</i> sp.	?wheat	-	-	-	-	-	-	-	-	-	-
<i>Hordeum vulgare</i> L.	barley, hulled indet.	-	-	-	-	-	-	-	-	-	-
<i>H. vulgare</i> L.	barley, indet	-	-	-	-	-	1	-	-	-	-
cf. <i>H. vulgare</i>	?barley	-	-	-	-	-	-	-	-	-	-
cf. <i>Avena</i> sp.	?oat	-	-	-	-	-	-	-	-	-	-
Cerealia	indet. cereal (estimate)	6	-	1	-	1	2	-	-	1	4
Cerealia	indet cereal fragments <1mm	+	-	+	-	-	+	-	-	-	+
Cereal chaff											
<i>Triticum dicoccum</i> Schubl.	emmer wheat glume base	-	-	-	1	-	-	-	-	-	-
<i>T. spelta</i> L.	spelt glume bases	-	-	1	-	1	1	-	-	-	-
<i>T. spelta</i> L.	spelt rachis fragments	-	-	-	-	-	-	-	-	-	-
<i>Triticum</i> sp(p).	wheat glume bases	2	-	-	-	-	1	-	-	-	-
Other plant/weed seeds											
<i>Ranunculus</i> sp.	buttercup	-	-	-	-	-	-	-	-	-	-
<i>Corylus avellana</i> L.	hazelnut shell fragments	-	-	-	-	-	-	-	-	-	1
<i>Persicaria</i> sp.	knotweed	-	-	-	-	-	-	-	-	-	-
Polygonaceae indet		-	-	-	-	-	-	-	-	-	-
<i>Prunus spinosa</i> L.	sloe/blackthorn shell fragments	-	-	-	-	-	-	-	-	-	-
<i>Vicia/Lathyrus</i> sp.	vetch/fare/vetchling (small <2mm)	-	-	-	-	-	-	-	-	-	-
<i>Vicia/Lathyrus/Pisum</i> sp.	vetch/fare/vetchling/pea (<2mm)	-	-	-	-	-	-	-	-	-	-
<i>Medicago/Trifolium</i> sp.	medicks/clovers (small seeds)	-	1	1	-	-	-	-	-	-	-
cf <i>Plantago lanceolata</i>	?ribwort plantain	-	-	1	-	-	-	-	-	-	-
<i>Galium aparine</i> L.	cleaver	-	-	-	-	-	-	1	-	-	1
<i>Galium</i> sp.	bedstraw	-	-	-	-	-	-	-	-	-	-
<i>Arrhenatherum elatius</i> var <i>bulbosum</i> (Willd.) St-Amans	onion couch tuber fragments	1	-	-	-	1	-	16	7	22	6
Poaceae indet.	grasses (large seeds)	-	-	-	-	1	-	-	-	-	2
Poaceae indet.	grasses (small seeds)	-	1	3	1	-	-	1	1	-	-
indeterminate	rhizome/tuber fragments	-	-	4	-	2	-	26	6	39	4
indeterminate	wood charcoal (><2mm)	++++	+/+	++++	++++	++++	++++	++++	++++	++++	++++
Total		10	2	11	2	6	5	44	14	62	10
Item density (per litre of processed soil)		1.4	0.3	2.2	0.3	0.9	0.5	7.3	1.8	29.5	0.5
											0.1
											0.3

Item frequency: + = 1–10 items; ++ = 11–50 items; +++ = 51–150; ++++ = 151–250; +++++ = >250 items

Table 4.11 continued: Charred plant remains from Phase 2 settlement SL1

kindling for the cremations (Robinson 1988). The presence of *Arrhenatherum elatius* var *bulbosum* tubers may indicate areas of ungrazed or lightly grazed grassland in the vicinity of these features and burnt partially cleared grassland vegetation under the pyre or the use of turves in their construction (Murphy 2003). It has also been suggested that charred tubers in cremation deposits may represent the remains of food offerings (Jones 1978, 107).

A few hazel (*Corylus avellana*) nut and sloe/black-thorn (*Prunus spinosa*) fruit stone shell fragments in two of the grave fill samples may be from gathered wild foods, either used as offerings or eaten by people attending the cremation with the remains then being discarded onto the fires. Another possibility is that these fruits were incidentally burnt as part of wood fuel used for the cremations. There were also a few wild plant/weed seeds in 14 grave fills from species associated with disturbed (including cultivated) ground, waste places and possibly grassland areas. They include *Ranunculus* (buttercup), *Plantago lanceolata* (ribwort plantain), *Galium aparine* (cleaver) and Poaceae (wild grasses), all of which may have been used as kindling for the cremations.

The little cereal (grains and chaff) debris in six grave fills included evidence for hulled wheat, both emmer (*Triticum dicoccum*) and spelt wheat (*T. spelta*) and also barley (*Hordeum vulgare*), mainly from a cluster G48 of four cremation burials within cemetery L19. The paucity of material means it is not possible to establish whether these remains represent the burnt residues of food offerings or were incidentally incorporated into these features from low-level/domestic activities taking place elsewhere on the site.

Other features (L2, L11, L20)

The fills of four other middle Bronze Age/early Iron Age features produced charred plant remains, consisting mainly of a little cereal debris. They included a small assemblage of hulled (spelt) wheat and hulled barley from pit G159 (enclosure L2), occasional grains and two hulled wheat chaff fragments from ditch G17 (L11), and a single grain in one of the postholes of structure G68 and a few grains and weed seeds in pit G160 (both L20).

Discussion

Most of the charred plant remains from the middle Bronze Age/early Iron Age samples consisted of (onion couch) tubers, roots and rhizomes, which may either represent fuel for the cremations and/or areas of ungrazed or lightly grazed grassland close-by.

The few cereal remains provide only a limited insight into arable agriculture during this period. They show the presence of hulled wheat (both emmer and spelt) and hulled barley. Samples from previous investigations of the late Bronze Age ringwork to the east produced poorly preserved and fragmented charred cereal grain, none of which, however, could be identified further (Letts 2001, 84).

Hulled wheat and hulled barley were the two main cereals cultivated during the Bronze Age with spelt becoming more widespread in the Iron Age (Greig 1991, 302 and 306). While spelt was slightly better represented than emmer at the site, the few chaff fragments means that it was not possible to establish which (if either) was dominant during this period. At the nearby site of Raunds, emmer was the main cereal along with a little barley in a charred assemblage within a late Bronze Age

hut, with the earliest dated assemblages of spelt wheat only appearing in the Iron Age (Campbell and Robinson 2007, 36).

The few poorly represented potential cereal weeds in the samples, including *Persicaria* (knotweed) and *Galium aparine*, provide little information on other aspects of crop husbandry during this period. *Galium aparine* is an indicator of loam soils (Hanf 1983) and may perhaps reflect the cultivation of the free-draining loamy soils around the site and the autumn sowing of crops. This plant, however, also grows in hedgerows and scrub (Stace 2005). A possible oat (*Avena*) grain in one sample is probably a cereal weed.

Early/middle Iron Age (Phase 3)

Small amounts of charred plant remains were found in five samples (Table 4.12); two fills of a water-pit produced fairly large waterlogged plant assemblages (Table 4.13).

Charred plant remains

The small assemblages consisted mainly of cereal debris with grains and chaff in six and three samples respectively; they provide evidence for hulled wheat (including emmer) and (hulled) barley. Other British Iron Age sites have shown similar results – hulled wheat and hulled barley being the main cereals, with spelt usually being the dominant wheat with only occasional finds of emmer (Greig 1991, 306). This was the case at a number of Iron Age sites close-by, for example just to the west in excavations at Twywell (Jackson 1975) and to the south-west at Bourton Way, Wellingborough (Giorgi 2020, 88), Station Road, Higham Ferrers (Giorgi 2020, 82–90, Moffett 2009) and Earls Barton (Giorgi 2018). It is not possible, however, on the basis of the few cereal remains from this phase of the site to establish whether the presence of emmer and the absence of definite spelt is significant.

There were only several charred weed seeds in these samples, including a *Galium aparine* seed in a fill of ringwork ditch L7, suggesting perhaps the continued cultivation of the surrounding loam soils and the autumn sowing of crops. Cereal remains comprised a small number of grains from a storage pit in cluster L13; occasional grains and chaff fragments from quarry pits L8 and water-pits L10; and a modest-sized cereal assemblage (grain and chaff) in a water-pit F1251/1259/1704/1706/G36 (L21) to the south-east. The sample from ringwork L7 produced just one charred grain and a few weed seeds including *Galium aparine*.

The cereals from the prehistoric samples in both Phases 2 and 3 may have been used for making bread, porridge or gruel or were cooked with other foodstuffs in stews or soups (Renfrew 1985, 15). Barley may have also been used as animal (horse) feed.

Waterlogged plant remains

Two fills of pond G56 (L3) produced rich and broadly similar waterlogged plant assemblages (Table 4.13). There was a wider species diversity in fill (299) and a greater item frequency in the underlying fill (1603) (Fig. 2.10 section g).

There were relatively few wetland plants represented in either sample. Fill (1603) contained a few records for *Ranunculus Batrachium* (crowfoots) – a large group of water plants including aquatic and semi-terrestrial species often found in unpolluted environments – and fill (299)

	Phase										
	Site Landscape			3			4			5	
	Land-use area	Group	Feature type	Quarry pit	Water-pit	Storage pit	Water-pit	Ditch	Quarry pit	Quarry pit	Ditch
		8		161	10	13	21	7	25	55	6
				485	20	91	36	130	66	668	136
					253	862	1259	10010	537	26	30004
		19			17	28	67	21	20	30	18
		30			2	30	5	30	14	30	30
		1			4	350	62	3	9	2	<1
Cereals grains											
<i>Triticum dicoccum/spelta</i>	emmer/spelt wheat	-	-	-	-	1	-	-	-	-	1
<i>T. cf. dicoccum/spelta</i>	?emmer/spelt wheat	-	-	-	-	1	1	-	-	-	-
<i>T. aestivum/turgidum</i> type	free-threshing wheat	-	-	-	-	-	-	-	-	-	-
<i>T. cf. aestivum/turgidum</i> type	?free-threshing wheat	-	-	-	-	-	-	-	-	1	-
<i>Triticum</i> sp(p).	wheat	-	-	-	1	-	-	-	-	3	-
cf. <i>Triticum</i> sp(p).	?wheat	-	-	-	-	2	-	-	-	2	-
<i>Hordeum vulgare</i> L.	barley, hulled twisted	-	-	-	-	-	-	-	-	-	-
<i>H. vulgare</i> L.	barley, hulled straight	-	-	-	-	1	-	-	-	-	-
<i>H. vulgare</i> L.	barley, hulled indet.	-	-	-	-	-	-	-	-	-	-
<i>H. vulgare</i> L.	barley, indet twisted	-	-	-	-	-	1	-	-	-	-
cf. <i>H. vulgare</i>	?barley	-	-	-	1	-	1	-	-	-	-
Cerealia	indet. cereal (estimate)	1	-	-	-	4	10	1	3	5	-
Cerealia	indet cereal fragments <1mm	+	-	-	+	+	+	-	+	+	+
Cereal chaff											
<i>Triticum dicoccum</i> Schubl.	emmer wheat spikelet fork	-	-	-	-	-	3	-	-	-	-
<i>T. dicoccum</i> Schubl.	emmer wheat glume base	-	-	-	-	-	7	-	-	-	-
<i>T. spelta</i> L.	spelt glume bases	-	-	-	-	-	-	-	4	1	-
<i>Triticum</i> sp(p).	wheat glume bases	-	-	-	1	-	6	-	3	3	1
<i>Triticum</i> sp.	wheat rachis fragments	-	-	-	-	-	-	-	1	1	-
<i>Triticum</i> sp.	wheat spikelet forks/bases	-	-	-	-	-	1	-	1	-	-
Other plant/weed seeds											
<i>Corylus avellana</i> L.	hazelnut shell fragments	-	-	-	-	-	-	-	-	1	1
<i>Vicia/Lathyrus/Pisum</i> sp.	vetch/tare/vetchling/pea (>2mm)	-	-	-	-	-	-	-	-	-	-
Fabaceae indet.	pea family (small round cotyledons)	-	-	-	-	-	-	-	-	3	-
<i>Galium aparine</i> L.	cleaver	-	-	-	-	-	-	1	-	-	-
cf. <i>G. aparine</i>	?cleaver frags	-	-	-	-	-	-	-	-	-	-
Asteraceae indet		-	-	-	-	-	-	2	-	-	-
Poaceae indet.	grasses (large seeds)	-	-	-	-	-	-	-	-	1	-
Poaceae indet.	grasses (small seeds)	-	-	-	-	-	-	-	-	1	-
indeterminate	rhizome/tuber fragments	-	-	-	-	-	-	-	-	2	-
indeterminate	wood charcoal (>/<2mm)	+++/+++++	++++/+++++	+++++/+++++	+++++/+++++	+++++/+++++	+++++/+++++	+++++/+++++	+++++/+++++	+++++/+++++	+//++++
Total		1	3	3	3	9	4	4	12	24	3
Item density (per litre of processed soil)		0.03	1.5	1.5	0.2	0.3	0.1	0.1	0.9	0.8	0.1

Item frequency: + = 1–10 items; ++ = 11–50 items; +++ = 51–150 items; ++++ = 151–250 items; +++++ = >250 items

Table 4.12 Charred plant remains from Phases 3–5

	Phase				5			
	Site	Land-use area	Group	Posthole	Posthole	Posthole	Posthole	Pit
	Feature type	Feature number	Sample number	vol processed soil (litres)	vol flot (ml)	Posthole	Posthole	Posthole
						22	23	582
						10	10	24
						<1	1	10
								1
								2
Cereal grains								
<i>Triticum dicoccum/spelta</i>	emmer/spelt wheat	-	-	-	-	-	-	-
<i>T. cf. dicoccum/spelta</i>	?emmer/spelt wheat	-	-	-	-	-	-	-
<i>T. aestivum/turgidum</i> type	free-threshing wheat	-	-	-	-	-	-	-
<i>T. cf. aestivum/turgidum</i> type	?free-threshing wheat	-	-	-	-	-	-	-
<i>Triticum</i> sp(p).	wheat	-	-	-	-	-	-	-
cf. <i>Triticum</i> sp(p).	?wheat	-	-	-	-	-	-	-
<i>Hordeum vulgare</i> L.	barley, hulled twisted	-	-	-	-	-	-	-
<i>H. vulgare</i> L.	barley, hulled straight	1	-	-	-	-	-	-
<i>H. vulgare</i> L.	barley, hulled indet.	1	-	-	-	-	-	-
<i>H. vulgare</i> L.	barley, indet twisted	3	-	-	-	-	-	-
cf. <i>H. vulgare</i>	?barley	2	-	-	-	-	-	-
Cerealia	indet. cereal (estimate)	2	-	-	-	-	-	-
Cereal	indet cereal fragments <1mm	2	-	-	-	-	-	-
Cereal chaff		+	-	-	-	+	+	+
Cereal chaff								
<i>Triticum dicoccum</i> Schubl.	emmer wheat spikelet fork	-	-	-	-	-	-	-
<i>T. dicoccum</i> Schubl.	emmer wheat glume base	-	-	-	-	-	-	-
<i>T. spelta</i> L.	spelt glume bases	-	-	-	-	-	-	-
<i>Triticum</i> sp(p).	wheat glume bases	-	-	-	-	-	-	-
<i>Triticum</i> sp.	wheat rachis fragments	-	-	-	-	-	-	-
<i>Triticum</i> sp.	wheat spikelet forks/bases	-	-	-	-	-	-	-
Other plant/weed seeds		-	-	-	-	-	-	-
<i>Corylus avellana</i> L.	hazelnut shell fragments	-	-	-	-	-	-	-
<i>Vicia/Lathyrus/Pisum</i> sp.	vetch/tare/vetchling/pea (>2mm)	-	-	-	-	-	-	-
Fabaceae indet.	pea family (small round cotyledons)	-	-	-	-	-	-	-
<i>Galium aparine</i> L.	cleaver	-	-	-	-	-	-	-
cf. <i>G. aparine</i>	?cleaver frags	-	-	-	-	-	-	-
Asteraceae indet		-	-	-	-	-	-	-
Poaceae indet.	grasses (large seeds)	-	-	-	-	-	-	-
Poaceae indet.	grasses (small seeds)	-	-	-	-	-	-	-
indeterminate	rhizome/tuber fragments	-	-	-	-	-	-	-
indeterminate	wood charcoal (>/<2mm)	-	-	-	-	-	-	-
Total		10	2	2	2	2	3	2
Item density (per litre of processed soil)		1	0.3	0.2	0.3	0.3	0.3	0.1

Item frequency: + = 1–10 items; ++ = 11–50 items; +++ = 51–150 items; ++++ = 151–250 items; +++++ = >250 items

Table 4.12 continued: Charred plant remains from Phases 3–5

	Context number	299	1603
	Sample number	81	82
	vol processed soil (litres)	10	10
	vol flot (ml)	30	2500
	% of flot scanned wet		25%
	% of flot scanned dry		75%
<i>Ranunculus acris/repens/bulbosus</i>	buttercups	++	
<i>R. subg. Batrachium (DC) A</i>	crowfoots		+
<i>Urtica dioica</i> L.	common nettle	+++++	++++
<i>Chenopodium</i> spp.	goosefoots etc.	+	+
<i>Atriplex</i> spp.	orache	+	
<i>Stellaria media</i> (L.) Vill.	common chickweed	++	
Caryophyllaceae indet.			+
<i>Polygonum aviculare</i> L.	knotgrass	+	
<i>Rumex</i> spp.	dock	++	+
<i>Rubus</i> sect <i>Glandulosus</i> Wimm. & Grab.	blackberry	+	+++
<i>R. idaeus/Glandulosus</i>	raspberry/blackberry		++
<i>Rubus</i> spp.	bramble etc. fragments	++	++
<i>Prunus spinosa</i> L.	blackthorn		++
<i>Prunus</i> spp.	plum/sloe/cherry stone fragments	+	++
<i>Crateagus monogyna</i> Jacq.	hawthorn	+	+++
<i>Cornus sanguinea</i> L.	dogwood	+	+++
<i>Linum usitatissimum</i> L.	flax	+	
<i>Chaerophyllum temulum</i> L.	rough chervil	+	+
<i>Aethusa cynapium</i> L.	fool's parsley	+	+
<i>Torilis</i> spp.	hedge-parsleys	+	+
Apiaceae		+	+
<i>Solanum nigrum</i> L.	black nightshade		+
<i>Solanum</i> spp.	nightshade	+	
Lamaiceae indet		+	++
<i>Sambucus nigra</i> L.	elder	++	+++
<i>Carduus/Cirsium</i> spp.	thistle	+	+
<i>Lapsana communis</i> L.	nipplewort	++	
<i>Sonchus asper</i> (L.) Hill	spiny milk-/sow-thistle	+	
<i>Eleocharis palustris/uniglumis</i>	spike-rush	+	
<i>Scirpus</i> spp.	wood club-rush	+	
Poaceae indet.	wild grass (mainly small seeds)	++	+
Bryophyta indet.	moss fragments	++	++++
Indet. bud fragments		++	+++
Indet. thorn fragments		+	+
Indet. leaf abscission pads		+	
Indeterminate (round) wood frags/wood shavings		+++ /+++++	+++++ /+++++
Charcoal		++ /++++	++ /++
Indeterminate items		+	+

Item frequency: + = 1–10 items; ++ = 11–50 items; +++ = 51–150 items; ++++ = 151–250 items; +++++ = >250 items

Table 4.13: Waterlogged plant remains from Phase 3 pond G56 (L3)

produced a few remains of *Eleocharis* (spike-rush) and *Scirpus* (wood club-rush). Cladoceran ehippia (water flea) eggs were present in both fills with particularly large numbers in (1603), evidence for standing (albeit perhaps temporary) bodies of water.

The two samples contained evidence for a range of plants associated with disturbed (including cultivated) ground and waste places, for example *Chenopodium/Atriplex* (goosefoot/orache), *Polygonum aviculare* (knot-grass), *Stellaria media* (common chickweed), *Aethusa cynapium* (fool's parsley), *Solanum nigrum* (black nightshade), and *Sonchus asper* (spiny milk-/sow-thistle). These remains may indicate areas of disturbed, trampled ground around the pond; some of the seeds could be from arable weeds incidentally imported onto the site with harvested crops, although no cereal remains were recovered from this feature.

Two well-represented species in both samples were *Urtica dioica* (common nettle) – found in a range of habitats but particularly woodland, fens, grassy places and cultivated ground – and *Sambucus nigra* (elder), which grows in hedges, woods, waste and rough ground. Both are indicative of nitrogen-rich soils and are often found

in well-manured soils and where animals defecate; as such, they may point to grazing livestock nearby, perhaps watering at the pond. All the other species listed above are also found in nutrient/nitrogen-rich soils and may represent human activities and areas of rubbish/waste disposal close-by.

Several species, including *Polygonum aviculare* and *Stellaria media*, are indicative of open ground. There was also a good range of species suggesting woodland/hedgerow/scrub vegetation nearby, with good representation for *Rubus* species including *Rubus* sect *Glandulosus* (blackberry), *Sambucus*, *Prunus* species including *Prunus spinosa*, *Crateagus monogyna* (hawthorn), and *Cornus sanguinea* (dogwood). These species are found in Ellenberg's ecological groups 6.2 (woodland clearing communities) and 8.41 (woodland mantle scrub and hedges) (Ellenberg 1988). Large amounts of wood/twig fragments and occasional thorns in the two samples may also be from some of the small trees and shrubs listed above. The blackberry and elderberry seeds, sloes and haws may represent the residues of gathered and consumed wild foods. There were also the remains of a few herbaceous plants that may be found in hedgerows,

including *Chaerophyllum temulum* (rough chervil) and *Lapsana communis* (nipplewort), although these species also grow in grassy places or rough/waste ground. Occasional seeds of cultivated flax (*Linum usitatissimum*) were also found in the fill (299); flax has been identified from other Iron Age sites in England (Greig 1991, 306) with the seeds potentially used as food in soups or stews and the plant fibres used for textiles.

Late Iron Age/early Roman (Phase 4)

Three samples produced very small amounts of charred plant remains (Table 4.12), consisting largely of cereal debris (grains and chaff). Identifiable remains show the presence of hulled wheat, including spelt and a possible free-threshing wheat grain (*Triticum aestivum/turgidum*).

Current archaeobotanical evidence shows that spelt wheat was one of the two main cereals (along with barley) cultivated during the Iron Age and Romano-British periods with less evidence for emmer and free-threshing wheat (Greig 1991, 306 and 309; van der Veen 2016; Lodwick 2017). Spelt appears to be the dominant grain on the basis of the results from other Romano-British excavations in this area of the country (Lodwick 2017, 26) including sites close-by – for example at Higham Road, Burton Latimer (Giorgi 2019) and Earls Barton (Giorgi 2018), both of which also produced small numbers of free-threshing wheat grains. Both spelt and free-threshing wheat have excellent baking and milling properties (Jones 1981, 107; Cool 2006, 70); rotary quern RA27 is further evidence for grain milling on site.

There were also traces of charred hazelnut shell in two samples, possibly debris from gathered wild foods while there were also a few charred weed seeds, none of which, however, can provide any further information on crop husbandry practices. A few charred tuber/rhizome fragments were also found in a quarry pit fill G66 (L29).

The small amounts of mainly cereal debris were found in quarry pits within clusters L25 and L29, and from ditch L16 within the former ringwork which produced two grains (including one of hulled wheat) and a hazelnut shell fragment.

Early Anglo-Saxon (Phase 5)

Six samples produced only occasional or very small amounts of charred plant remains (Table 4.12): five from four postholes associated with ground-level buildings L30 and L31; and one from the fill of a pit G24 (L32).

The few charred remains from the postholes consisted mainly of cereal grains. They included: a small number of (six-row) hulled barley grains and a possible wheat grain in a posthole within structure G33; two hulled wheat chaff fragments, one of emmer and one of spelt, in a posthole within structure G87; and a few cereal grains, including one of free-threshing wheat, in a posthole within ground-level building G125. The pit G24 produced a possible wheat grain and a large legume seed (*Vicia/Lathyrus/Pisum*) perhaps from a cultivated pulse.

Little comment can be made on the basis of these few cereal remains, particularly given the difficulties with the dating of these sampled features. However, free-threshing wheat tends to replace hulled wheat (spelt) as the main wheat grain in the post-Roman period while hulled barley continues to be cultivated from the Roman into the Anglo-Saxon period (Greig 1991, 315). The presence of hulled wheat in G87 could, therefore, suggest a pre-Anglo-Saxon date for this feature; while

free-threshing wheat in G125 could indicate an Anglo-Saxon date, although occasional free-threshing wheat grains are sometimes found along with mainly spelt wheat in Roman deposits, for example, in excavations at Higham Road, Burton Latimer (Giorgi 2019) and Earls Barton (Giorgi 2018). There is also a possibility that the cereal remains may be residual or intrusive given the mixed pottery assemblage from these fills.

Summary

The charred plant remains provide only limited information on crop husbandry and other human activities at the site from the middle Bronze Age through to the early Anglo-Saxon period. There were very few charred cereal remains in any of the sampled phases, the grains and chaff showing a fairly consistent pattern in the range of cereals. Hulled wheat was present throughout the late prehistoric and Roman periods with evidence for emmer and spelt in Phase 2, only emmer in Phase 3 and only spelt in Phase 4. The paucity of cereal remains means that it is not possible to establish which of the two hulled wheats (if any) was ever dominant during each phase, although archaeobotanical evidence from other sites in this area suggests that spelt was the main hulled wheat from the Iron Age onwards. There was also evidence for possibly free-threshing wheat in Phase 4; while hulled barley was present in both Phases 2 and 3.

The samples from the early Anglo-Saxon (Phase 5) features produced evidence for both hulled (emmer and spelt) and free-threshing wheat as well as (six-row) hulled barley. The only other evidence for crop plants were a few waterlogged flax seeds in the early/middle Iron Age pond G56 (L3).

The potential collection of wild plant foods was represented by traces of charred hazelnut shell in Phases 2 and 4 along with the waterlogged plant remains of wild fruits (blackberries, elderberries, haws, sloes) in the early/middle Iron Age (Phase 3) pond. The plant remains from this feature may indicate human activities close-by and perhaps grazing animals watering at the pond, as well as scrub/hedgerow vegetation in the area.

There were only a few potential cereal weeds represented in the samples. The presence of *Galium aparine* in Phases 2 and 3 perhaps reflects the use of the loamy soils around the site for growing crops and the autumn sowing of cereals. The paucity of weed seeds and other crop-processing by-products may suggest that the grains had already been cleaned before arriving on site.

The cereal assemblages from all phases were small with low densities of 1.5 items or less per litre of processed soil and were distributed across the western area of excavation; there was slightly more cereal debris (c. 30 items) in two samples from a pit G159 (Phase 2) and a water-pit G36 (L21, Phase 3), both of which had an item density of c. 6 per litre of processed soil and both of which were located in the south-east part of the site. The grains and chaff in all phases represent cereal debris from the final stages of crop-cleaning (including the dehulling of hulled wheat) and food preparation/cooking, the small amounts of material suggesting low-level or domestic activities taking place elsewhere on the site.

In addition to the charred cereal remains, there were fairly good amounts of other charred plant debris in the middle Bronze Age/early Iron Age (Phase 2) cremation deposits, consisting mainly of tubers (including onion couch) and rhizome/root fragments. These may represent

the collection of wild (grassland) vegetation by uprooting for use as kindling or turves for construction purpose and/or are indicative of areas of ungrazed or lightly grazed grassland in the immediate vicinity of the cremations or close-by.

4.3 CHARCOAL

Dana Challinor

Introduction and methods

Charcoal was not abundantly preserved at the site and only 17 features produced reasonable assemblages. These comprised samples from middle Bronze Age/early Iron Age (Phase 2): cremation burials G25 (L2) and L19, pits G159 (L2) and G160 (L20), and a ditch G17 (L11); and from early/middle Iron Age (Phase 3) ringwork ditch L7, water-pits L10 and G36 (L21), and storage pit cluster L13. Other phases did not produce sufficient charcoal for analysis.

Since there were multiple samples with scant preservation of charcoal, only 15 merited full analysis. A further 11 samples were scanned for comparison (especially where there were multiple samples from one feature). Standard identification procedures were followed using identification keys (Hather 2000, Schweingruber 1990) and modern reference material. The charcoal was fractured and examined at low magnification (up to $\times 45$), with representative fragments examined in longitudinal sections at high magnification (up to $\times 400$). Where available, 50 fragments per feature were identified. Observations on maturity and other features were made where appropriate. Classification and nomenclature follow Stace (2005).

Results

A total of 26 samples were examined, with 560 quantified fragments. The charcoal was poorly preserved, not only in quantity, but in condition. There was heavy sediment encrustation and strong vivianite staining. This is indicative of deposition in partially waterlain or seasonally waterlogged conditions and may, in part, account for the general paucity of charcoal in the features since charcoal is susceptible to damage by repeated wetting and drying. Heavily stained or infused charcoal is also difficult to identify since the pores are often obscured, especially in small fragments. This can lead to an over-representation of oak, which is more readily identifiable in poor and small material.

The majority of the charcoal was of indeterminate maturity, though roundwood was fairly frequently recorded on the basis of moderate to strong ring curvature. Tyloses were rarely observed, with only a few oak fragments confirmed as heartwood. Whilst sediment infilling

of pores undoubtedly obscured visibility, sapwood was positively identified in more fragments and samples than heartwood; this suggests that mature heartwood was not strongly present in the assemblages generally. Seven taxa were positively identified:

FAGACEAE: *Quercus* sp., oak

BETULACEAE: *Corylus avellana*, hazel

ROSACEAE: *Prunus* sp., blackthorn/cherry/plum

Maloideae incl. *Malus*, apple; *Pyrus*, pear; *Sorbus*, service tree/whitebeam/rowan and *Crataegus*, hawthorn

RHAMNACEAE: *Rhamnus cathartica* L., purging buckthorn

ACERACEAE: *Acer campestre* L., field maple

OLEACEAE: *Fraxinus excelsior*, ash

Amalgamated results are presented in Tables 4.14–4.16, with discussion by Land-use Area; the full results on individual samples are recorded in the project archive. There were no significant differences between samples and contexts from within a single feature.

Middle Bronze Age/early Iron Age (Phase 2)

Cremation burials

All charcoal assemblages analysed from cemetery G25 (within enclosure L2) were dominated by ash, with just a single small fragment of oak noted in F1293 (Table 4.14). The latter, and that of F953, produced scant charcoal, hence taxonomic proportions could not be assessed. However, there is a clear difference between the ash-dominated burials in cemetery G25 (L2) and graves G48 in cemetery L19, which produced a range of taxa including oak, hazel, blackthorn/cherry, hawthorn group, purging buckthorn, field maple and ash. Interestingly, burial F524 (G49, L19) produced a rich, ash-dominated assemblage similar to those in G25 (L2).

Two cremation burials (F953 and F1293) in G25 (L2) were radiocarbon-dated to the middle Bronze Age, and two burials (F524 and F1038) in cemetery L19 gave dates of late Bronze Age and mid-late Bronze Age respectively. Burial F1038 did not produce identifiable charcoal, but the fact that F524 was dated to the late Bronze Age indicates that chronological differences do not account for differences in taxonomic composition. Certainly, the use of ash for cremation is clearly demonstrated in both the middle Bronze Age burials of G25 (L2), as well as the late Bronze Age burial F524 (G49, L19). The three productive burials from cluster G48 (L19) appear to be distinct, forming a separate group, with perhaps a distinct approach to the selection and choice of pyre fuelwood. Certainly, there is no apparent link between fuel type and

Land-use Area Group Feature	407	412	2 25 953	1293	1303	930	19 48 921	978	49 524
<i>Quercus</i> sp., oak	—	—	—	+	—	6 (r)	29 (s)	3	—
<i>Corylus avellana</i> L., hazel	—	—	—	—	—	—	2	—	—
Maloideae, hawthorn etc.	—	—	—	—	—	6 (r)	4	30 (r)	—
<i>Acer campestre</i> L., field maple	—	—	—	—	—	—	—	5 (r)	—
<i>Fraxinus excelsior</i> L., ash	50 (rs)	25 (r)	++	+	50 (sr)	12 (s)	7 (s)	1	50 (s)
Indeterminate	—	—	—	—	—	3	5	5d	—

r = roundwood; s = sapwood, d = diffuse porous taxa; Brackets denote presence in some fragments only.

Note that results from samples and contexts from same features have been amalgamated.

Table 4.14: Charcoal from Phase 2 cremation burials associated with settlement SL11

age as some burials in F921 (G48) and F524 (G49) were adult, as were F412, F953 and F1293 (G25). Of these, two were probably male but the others were unsexed. Additionally, there was no distinction in the pyre fuel used for the adolescent burial in F407 (G25).

Generally, the level of calcination in the human bone remains was high, indicating efficient cremation (see below page 65). The use of ash on the pyre would have provided a suitably high and sustained heat to achieve the necessary temperatures and duration of burning. One burial F1293 (G25) produced less well-calcined material, suggesting that cremation was not as efficient or the pyre less well tended; certainly, the charcoal evidence does not suggest that the choice of fuelwood was a factor since ash (and possible oak) were used in this cremation, as in most of the burials.

Non-cremation-related features

The quantified data for these features is rather poor: pit G159 (L2) and pit G160 (L20), and ditch in G17 (L11) (Table 4.15). The results yielded a small range of taxa, all of which were also identified in the cremation assemblages in cemetery L19 – oak, hazel, hawthorn group, field maple and ash. A single fragment of oak heartwood was found in pit G159. Notably, oak was significantly more common and abundant than in the cremation assemblages and included a trace of mature wood.

Land-use Area	2	11	20
Group	159	17	160
Feature number	1436	1136	609
Feature type	Hearth	Ditch	Hearth
<i>Quercus</i> sp., oak	29 (rsh)	+	43 (6sr)
<i>Corylus avellana</i> L., hazel	1	–	–
Maloideae, hawthorn etc.	7	+	–
<i>Acer campestre</i> L., field maple	7	(+)	7
<i>Fraxinus excelsior</i> L., ash	*	+	–
Indeterminate	6 (k)	–	–

r = roundwood; s = sapwood; h = heartwood; k = knot
Brackets denote presence in some fragments only or cf. identification.

Table 4.15: Charcoal from Phase 2 non-cremation-related features in settlement SL1

Early/middle Iron Age (Phase 3)

Charcoal preservation in Phase 3 samples was generally poor, with frequent fragments appearing rounded,

as though subjected to water erosion. Four samples from the ringwork ditch and adjacent pits G130, water-pits G20 (L10) and G36 (L21), and a storage pit in L13 were examined (Table 4.16). Taxa were similar to earlier Phases 2 samples, with no new taxa identified: oak, hazel, blackthorn/cherry, hawthorn group, field maple and ash. Rare fragments of oak heartwood were recorded along with sapwood and roundwood. The assemblages probably represent the remains of fuel waste from activities occurring within the ringwork, with the possibility that the remains from the storage pit within L13 may have been associated with heating for sterilisation purposes. This pit produced a significantly rich assemblage of oak with occasional other taxa. Generally, oak is well represented in this phase, with only low quantities of ash and a small range of other taxa. The assemblages are fairly typical for domestic-type fires, utilising a range of available, but limited, woodland resources. All the taxa are hardwoods, meaning that they would provide a high heat, potentially long-lasting depending upon size of logs. There are some indications that trunkwood as well as branches were used.

Summary

The charcoal assemblages from the Phase 2 cremation burials suggest a clear preference in the use of ash wood for cremation. This is not surprising as ash provides a highly calorific fuel, but oak was more commonly utilised for cremation in the Bronze Age. At Raunds, for instance, seven out of nine burials are dominated by oak, compared with only one by ash (Campbell 2007, table 2.1). Campbell suggests a link between male burials and oak; this is evidently not the case at Thrapston. There was also a discrete group of burials G48 (cemetery L19), exhibiting greater diversity in pyre assemblages. Apart from the spatial location, with G48 being within the cemetery outside enclosure L2, there was no clear difference in age and gender, or chronological differences. Burials G49 were also within cemetery L19 but produced a similar assemblage to those of G25 within the enclosure. Ash is a coloniser tree and given that much of the wood derived from sapwood or roundwood, it could be argued that large, mature trees were scarce. That said, oak is well represented in the non-cremation assemblages at the site which, despite limited data, suggests that the selection of ash for pyres was deliberate. Certainly, ash is a minor component of the early/middle Iron Age assemblages, which indicate the chief use of oak, supplemented with other taxa, for fuel.

Site Landscape	3	4
Land-use Area	13	7
Group	91	130
Feature type	Storage pit	Ditch
Feature	862	10010
<i>Quercus</i> sp., oak	39 (srh)	15 (s)
<i>Corylus avellana</i> L., hazel	1	–
<i>Alnus/Corylus</i> , alder/hazel	–	–
<i>Prunus</i> sp., blackthorn/cherry	–	1
Maloideae, hawthorn etc.	1	(1)
<i>Acer campestre</i> L., field maple	3 (r)	3
<i>Fraxinus excelsior</i> L., ash	4 (r)	–
Indeterminate	2	–

r = roundwood; s = sapwood; h = heartwood; d = diffuse porous taxa
Brackets denote presence in some fragments only or cf. identification.

Table 4.16: Charcoal from Phase 3 features

4.4 HUMAN REMAINS

Natasha Powers

Introduction and methods

Burnt bone from ten cremation burials, one post-medi-eval quarry pit, and unburnt bone from two features were examined. The burnt bone was recorded in accordance with standard guidelines (McKinley 2004). The total weight of the sample was established in grams and the sample was passed through a series of graded sieves to separate the fractions greater than 10mm, 5mm and 2mm. Each resulting fraction was weighed and proportions were calculated as a percentage of the total bone present. Fragmentation was determined from largest fragment size and the average (mean) size of fragments. The approximate percentage of each colour of burnt bone was also described (Holden *et al.* 1995a; 1995b; McKinley 2004). The minimum number of individuals (MNI) was calculated by the number of repeated skeletal elements or parts thereof.

An assessment was made of the state of preservation of the articulated inhumations and disarticulated bone from 'good' (1) to 'poor' (3) (Connell and Rauxloh 2003). The elements present were catalogued by segment following the methods used by the Museum of London (Powers 2012). Age at death was estimated from observation of dental development and diaphyseal length data (Moorrees *et al.* 1963; Maresh 1970; Gustafson and Koch 1974). Measurements (in mm) were taken of dental and post-cranial features using landmarks identified in Buikstra and Ubelaker (1994). Pathological changes were recorded using standard osteological guidelines (Roberts and Connell 2004). A full catalogue and suite of metric data is available in the project archive.

Results

Middle Bronze Age/early Iron Age (Phase 2)

Inhumation

The well-preserved and largely complete and flexed remains of an infant who had died aged 2–3 years were recovered from grave F1141 (G37, L20); the bone was radiocarbon-dated to the late Bronze Age/early Iron Age (Table A3). Slight deposits of calculus were present on the mandibular molars and a small area of new bone formation was noted on the visceral surface of a fragment of the sternal end of a rib. Very fine capillary-like impressions were present on the internal surface of the occipital, with appearance of remodelled new bone. The new bone suggests that this child was suffering from a pulmonary infection at the time of their death, whilst the changes on the internal surface of the skull could result from inflammation or haemorrhage of the meninges, the result of one of a range of infectious or metabolic conditions (Lewis 2003).

Burnt bone

Ten assemblages of burnt bone were examined: five of the six cremation burials G25 (within enclosure L2) and five of the seven cremations burials within cemetery G48/G49 (L19) (Table 4.17). Burnt bone from four cremation burials was radiocarbon-dated: F953 and F1293 (G25) were middle Bronze Age; F1038 (G49) mid-late Bronze Age; and F524 (G49) late Bronze Age (Table A3).

Experiments have shown that cremation of an adult will produce an average of 1600–3600g of burnt bone

Feature	L	G	Total weight (g)
407			204.6
412			636.2
953	2	25	717.8
1293			1538.9
1299			*
1303			17.9
930			*
921		48	*
978			*
924	19		350.3
1042/1038		49	0.6
1044			19.2

* sample content partially lost in vehicle accident

Table 4.17: Total weight of burnt bone from Phase 2 settlement SL1

(McKinley 1989). Only burial F1293 contained a weight approaching this. Small quantities of partially burnt or charred animal bone were found in burials F407 (G25), F524 (G49), F953 (G25) (which also contained highly calcined animal bone) and F1293 (G25); burial F1303 (G25) also contained unburnt animal bone (Table 4.18). The former may indicate the placement of food (or animal) offerings on the pyre but the others are more likely to be accidental inclusions.

Feature	L	G	Animal bone
407			0.4g charred bone
953			0.5g partially burnt bone
953	2	25	0.7g highly calcined long bone shaft fragment
1293			0.5g partially burnt bone
1293			5.9g burnt bone
1303			0.1g three fragments of unburnt bone
924	19	49	0.8g one fragment

Table 4.18: Animal bone recovered from cremation burials in Phase 2 settlement SL1

The maximum fragment size observed was 64.1mm in burial F953 (G25) with average fragment sizes generally small (10–20mm) (Table 4.19). Approximately 60% of the 620g of residue examined from burial F1293 (G25) was burnt bone. With the exception of burial F1293, there was very little bone in the 2mm fraction. The size of the recovered fragments is likely to have been influenced by collection processes, post-depositional conditions and truncation. Longitudinal, transverse and spiral cracking were seen throughout the assemblage and indicate that the human remains were wet (fleshed) when they were cremated (Buikstra and Ubelaker 1994).

In general, the bone in each sample was predominantly off-white in colour, reflecting a high level of oxidation and heating at consistent temperatures of over 600°C (Holden *et al.* 1995a; 1995b). Greater variability of colour was generally a reflection of the smaller samples of bone (Table 4.20). The endocranium of burials F412 (G25) and F1038 (G49) were charred, probably reflecting the degree of protection afforded to the internal surfaces of the bone while the skull was complete. Charring was also noted on fragments of tibia and ribs from burial F1293 (G25), possibly reflecting a less consistent temperature during cremation than seen elsewhere, but as a whole the results suggest efficient cremation processes and a well-tended pyre.

Feature	L	G	Total weight (g)	Largest frag. (mm)	Mean frag. (mm)	>10mm (g)	% total	>5mm	% total	>2mm	% total
407			204.6	42.5	20	62.7	30.6	142.3	69.6	0	0.0
412			636.2	45.6	25	232.5	36.5	312.7	49.2	0	0.0
953	2	25	717.8	64.1	25	353.2	49.2	365.8	51.0	0	0.0
1293			1015.7	62.5	20	379.2	37.3	467.7	46.0	175.2	17.2
1303			17.9	18.6	5	2.7	15.1	6.2	34.6	9	50.3
921		*		21	<5	n/a	n/a	n/a	n/a	<0.1	100.0
930		48	*	10.6	10	0	0	<0.1	100.0	0	0.0
924	19		350.3	28.9	10	81.6	23.3	131.5	37.5	138	39.4
1042/1038		49	0.6	16.3	10	13.4	69.8	5.8	30.2	<0.1	0.0
1044			19.2	20	5	0.5	83.3	0.1	16.7	0	0.0

* sample content partially lost in vehicle accident

Table 4.19: Fragment size of cremated human bone from Phase 2 settlement SL1

Context	Feature	Sample	L	G	Colour
408		8			80% off white, 10% dark blue grey, 10% light blue grey
409		9			70% off white, 10% dark blue grey, 10% light blue grey, 10% charred
410	407	10			80% off white, 10% dark blue grey, 10% light blue grey
411		11			80% off white, 10% dark blue grey, 10% light blue grey
413		12			80% off white, 10% dark blue grey, 10% light blue grey
414		14			80% off white, 10% dark blue grey, 10% light blue grey
415	412	14			70% off white, 10% dark blue grey, 10% light blue grey, 10% charred
416		15			80% off white, 10% dark blue grey, 10% light blue grey
417		16			80% off white, 10% dark blue grey, 10% light blue grey
954		39	2	25	80% off white, 10% dark blue grey, 10% light blue grey
955	953	38			80% off white, 10% dark blue grey, 10% light blue grey
983		50			80% off white, 10% dark blue grey, 10% light blue grey
1294		69			70% dark blue-grey, 10% light blue grey, 20% off white
1294		69			90% off white, 5% dark blue grey, 5% light blue grey
1295	1293	70			40% dark blue-grey, 10% light blue grey, 50% off white
1295		70			50% dark blue-grey, 20% light blue grey, 30% off white
1296		71			60% off white, 20% dark blue grey, 20% light blue grey
1305		76			90% dark blue grey, 10% off-white
1306	1303	77			50% dark blue grey, 50% off-white
922		33			not burnt
923	921	34		48	50% dark blue grey, 50% off-white
935	930	44			50% light blue grey, 50% off-white
925		35			90% off white, 5% dark blue grey, 5% light blue grey
926	924	36	19		80% off white, 10% dark blue grey, 10% light blue grey
927		37			70% dark blue-grey, 10% light blue grey, 20% off white
1039		51		49	80% off white, 10% charred, 10% light blue grey
1041	1038	53			90% light blue grey, 10% off-white
1045	1044	55			50% light blue grey, 50% off-white

Table 4.20: Colour of the burnt human bone from Phase 2 settlement SL1

There was no indication that any of the deposits contained the remains of more than one individual. Seven of the burials contained sufficient bone that it was possible to estimate age and/or sex (Table 4.21). Of these, six were adult – three from G25, one from G48 and two from G49. Two of the adults from G25 were probably male. Burial F407 (G25) was that of an adolescent, aged in their early to mid-teens when they died. The group is too small to draw any statistically valid conclusions on the composition of the living population(s) it represents.

Six of the burials contained identifiable bone from all areas of the body with burials F1038 (G49) and F1303 (G25) consisting almost exclusively of skull fragments (Fig. 4.1). Burial F524 (G49) contained a greater proportion of lower limb fragments than expected; most of them were unidentifiable cortical fragments from the large bones of the legs. Notable findings included a number of intact hand and foot phalanges and other small bones

from the hands and feet, as well as tooth fragments, in burials F407 (G25), F412 (G25), F524 (G49), F953 (G25), and F1293 (G25), supporting the idea of careful collection of the burnt remains.

Early/middle Iron Age (Phase 3)

Two pieces of disarticulated skull were recovered from the upper deposits of the ringwork ditch F10010 (SL4). Although the two pieces could not be definitively associated, the minimum number of individuals represented is one probable subadult, based on the open sutures and thin vault. There was a prominent internal frontal crest and a supraorbital foramen was present on the left side. A radiocarbon date for this individual indicated that they had died in the late Bronze Age (Table A3). Possible cribra orbitalia (Stuart-Macadam 1991) was noted in the left orbit but only a very small portion of the bone remained and so the diagnosis remains tentative.

Feature	SL	L	G	Age at death	Sex	Comments
407				11–16 years	n/a	Molar root 3/4 complete (est. 11–12 years). Proximal phalanx and head of femur unfused (<16 years)
412		2	25	Adult	Male	Robust individual with prominent brow ridge
953				Adult	–	
1293				Adult	?Male	Prominent nuchal crest
1303	1			–	–	
921				Adult	–	
930		48		–	–	Single fragment of probable human bone
924		19		Adult	–	
1038			49	Adult	–	
1044				–	–	Very little bone present

Table 4.21: Sex and age at death of cremated individuals from Phase 2 settlement SL1

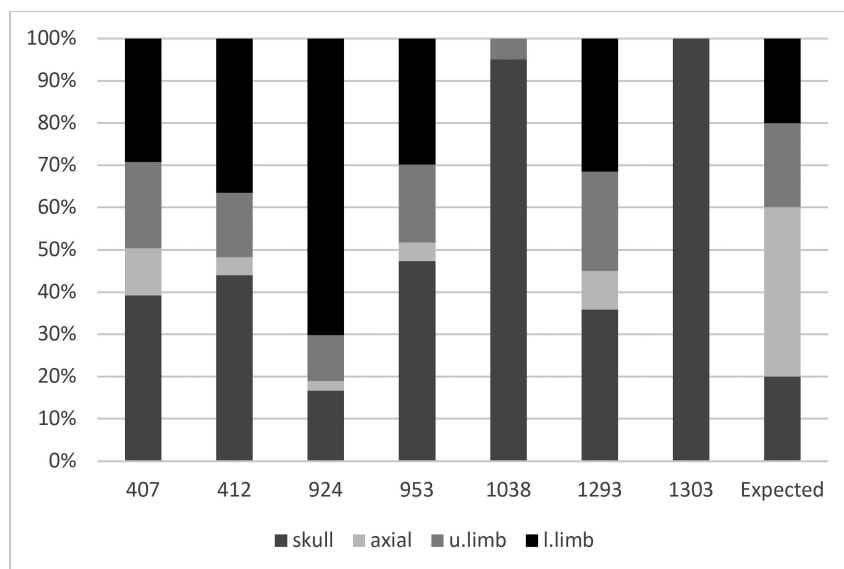


Figure 4.1: Chart showing the percentage of identifiable human bone by body area

Summary

Radiocarbon dating of the disarticulated skull found in the upper fill of the ringwork ditch indicates that the person from whom it came died in the late Bronze Age. This suggests that it may have been redeposited from a burial which previously occupied the site. Alternatively, it is possible that this represents evidence of the deliberate curation of human bone, which has been suggested to have given Iron Age communities the ability to ‘influence supernatural processes capable of ensuring their wellbeing’ (Armit 2017, 171). Cranial fragments are often given as examples, having been found within Iron Age features, though the difference in the apparent date of death and deposition here would indicate the passage of a considerable amount of time. However, it is also common for disarticulated human remains to have been deliberately deposited in isolation in non-mortuary contexts during the late Bronze Age (Brück 2017, 145).

The flexed position of infant F1141 (G37) appears typical of Bronze Age burial practices. The individual had been suffering from a chronic pulmonary infection when they died.

Interpretation of the cremation burials is somewhat compromised by the small sample sizes but no evidence of deliberate preferential selection of particular body parts was identified, and little evidence of pyre or grave goods. Only a small number of burials containing possible evidence of burnt food or animal offerings were present. The cremation and collection processes appear to have been relatively efficient.

Of the four cremation burials that were subject to radiocarbon determinations, F953 and F1293 (G25) were dated to the middle Bronze Age, with F524 and F1038 (G49) slightly later in date. However, the probability range means that they could all be contemporary.

Appendix I: Pottery

Jackie Wells

Fabric groups are summarised below, defined on the basis of principal inclusion type and character. Full details can be found in the project archive.

Ware	Code	Sherd No.	Wt (g)
Prehistoric			
Grog and sand	GR/QU	30	228
Flint and quartz	FL	3	72
Shell and grog	SH/GR	123	1219
Coarse shell	SH	124	2349
Fine shell	SH	74	697
Shell and sand	SH	39	1313
Grog	GR	2	8
Fine sand	QU	1	8
Late Iron Age grog	GR	10	697
Romano-British			
Samian ware	SAM	5	57
Oxidised sandy	OX	1	45
White-slipped oxidised sandy	OX	1	9
Fine buff ware	OX	1	38
Nene Valley grey ware	GW	14	122
Coarse grey ware	GW	4	64
Fine grey ware	GW	9	71
Sandy black ware	RE	6	106
Sandy reduced ware	RE	4	47
Pink-grogged ware	PKG	2	171
Nene Valley colour-coated ware	NVCC	3	27
Shelly ware	SH	34	714
White ware	WW	1	16
Lumpy white ware	WW	4	455
Grog	GR	14	460
Anglo-Saxon			
Coarse quartz	QU	6	40
Sandstone	SS	28	394
Oolitic	OL	3	25
Sandstone and limestone	QU/LI	2	31
Medieval			
Lyveden/Stanion 'B' ware	F320*	1	13
Post-medieval and modern			
Iron-glazed earthenware	F426*	3	115
Creamware	F415*	2	10
20th century wares	F1000*	1	17

* Northants. CTS Code

Table A1: Pottery type series

Appendix II: Coins

Peter Guest

The investigation produced a total of nine coins, including five Roman bronze issues, two silver coins of the 12–14th centuries, and two Rose Farthings struck during the reign of Charles I (Table A2).

The Roman coins comprise a late-3rd-century radiate and four issues struck during the first half of the 4th

century. One of these latter coins (RA16) had been pierced and must have been re-used as a pendant, almost certainly in the Anglo-Saxon period or later.

RA	Phase	L	Denomination	Date	Ruler/obverse	Reverse
7	9	56	Radiate	260–96	uncertain	uncertain
16	9	56	AE2 (perforated)	318–24	House of Constantine	SARMATIA DEVICTA
1	8	52	AE2	320–24	CRISPUS Caesar	CAESARVM NOSTOROVVM - VOT X
23	4	16	AE2	330–35	CONSTANTINE II Caesar	GLORIA EXERCITVS - 2 stds
8	9	56	AE3	337–40	HELENA/ THEODORA?	uncertain
13	9	56	Halfpenny (cut)	1180–1247	HENRY II– HENRY III	short cross coinage
6	9	56	Farthing	1327–77	EDWARD III	uncertain mint
18	9	56	Farthing	1625–49	CHARLES I	Rose farthing
19	7	41	Farthing	1625–49	CHARLES I	Rose farthing

Table A2: Coins

Appendix III: Radiocarbon dates

SUERC	GU	Material	Determination BP	Calibrated date (95.4%)	Period	Sample	Feature	SG	G	L	SL	Phase	Description
78758	47065	Charcoal: Fraxinus excelsior (ash)	2986±35	1305–1109 cal BC (90.5%)	Middle Bronze Age	6	401	35	26	2	1	2	Posthole
78762	47066	Charcoal: Quercus sp. (oak)	2823±35	1088–899 cal BC (94.7%)	Middle/late Bronze Age	80	1436	26	159	2	1	2	Internal pit/posthole of building
78763	47067	Charcoal: Maloideae (hawthorn)	2840±35	1111–914 cal BC	Middle/late Bronze Age	66	1148	127	87	31	7	5	Posthole – east side of building
78764	47068	Charcoal: Hordeum vulgare (hulled barley)	1448±35	553–655 cal AD	Early Anglo-Saxon	3	240	118	33	30	7	5	Posthole
78765	47069	Unburnt human bone	2538±35	801–542 cal BC	Late Bronze Age/early Iron Age	–	1141	125	37	20	1	2	Inhumation
78766	47070	Charcoal: cf. Prunus sp. (blackthorn/cherry)	1465±35	542–650 cal AD	Early Anglo-Saxon	24	582	183	125	31	7	5	Posthole – south side of building
78767	47071	Cremated human bone	2975±35	1291–1056 cal BC (94.6%)	Middle Bronze Age	39	953	31	25	2	1	2	Unurned cremation burial
78768	47072	Cremated human bone	2919±35	1217–1011 cal BC	Middle Bronze Age	69	1293	32	25	2	1	2	Unurned cremation burial
78772	47073	Cremated human bone	2764±35	999–832 cal BC	Late Bronze Age	37	524	67	49	19	1	2	Unurned cremation burial
78773	47074	Cremated human bone	2875±35	1131–931 cal BC (90.8%)	Middle/late Bronze Age	51	1038	69	49	19	1	2	Unurned cremation burial
78774	47075	Unburnt human bone	2744±35	976–814 cal BC	Late Bronze Age	–	10010	192	130	7	2	3	Ringwork ditch
78775	47076	Charcoal: Maloideae (hawthorn)	1392±35	592–681 cal AD	Early Anglo-Saxon	7	403	28	24	32	7	5	Pit
84095	49973	Charcoal: Quercus sp. (oak)	2910±22	1195–1016 cal BC	Middle Bronze Age	25	609	234	160	20	1	2	Posthole
84096	49974	Cereal grain: unidentified	1433±24	580–654 cal AD	Early Anglo-Saxon	23	579	183	125	31	7	5	Posthole – south side of building
84097	49975	Cereal grain: unidentified	3154±24	1497–1394 cal BC	Middle Bronze Age	32	781	88	68	20	1	2	Posthole alignment

Table A3: Summary of radiocarbon determinations ordered by SUERC lab number

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Albion Archaeology's 2017 excavation on the south-east edge of Thrapston, Northamptonshire revealed repeated use of the land for settlement from the middle Bronze Age to the early Anglo-Saxon period. This sequence began with a middle/late Bronze Age ringwork, as well as a contemporary settlement and burials to the south-west. The ringwork has been preserved *in-situ* and was therefore only subjected to limited investigation, but similar late Bronze Age ditched enclosures across southern England have been referred to as 'ringforts' and are considered to be of high status.



The early Anglo-Saxon settlement comprised a mixture of rectangular ground-level buildings, smaller structures and sunken-featured buildings, numbering at least 28 in all. Its overall layout exhibits a degree of regularity, based on short-perch grid-planning, which may indicate an association with the major minster at Oundle.

