

The Waithe Valley Through Time

I. The Archaeology of the Valley and Excavation and Survey in the Hatcliffe Area



The Central Lincolnshire Wolds Research Project

Volume 2

Steven Willis

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Published by Pre-Construct Archaeology Limited

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ISBN 978-1-9996155-4-3

Front cover: Excavation in progress at Trench C, looking south-west.

Back cover: top - view looking north-east from the plateau at Hatcliffe Top; second - excavation in progress at Trench D, looking east; third - excavation in progress at Trench E, looking north-east; fourth - Georgia at Trench C after rain; fifth - SEM image of part of the headplate of the cruciform Anglo-Saxon brooch (Item 64 RF 2072) including circular piercing (prepared by Dr Victoria Mason).

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Steven Willis

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2019

Foreword

I, as a member and an active field worker of the North East Lincolnshire Archaeology and Local History Society consider it a privilege not only to be actively involved in this project but to have the opportunity to write this foreword to the second volume documenting this most interesting and original archaeological research. This is especially welcome given that this area of northern Lincolnshire has been one which archaeologists have ignored but which has been crying out for such a project. This volume will add greatly to the results in the first volume of the Central Lincolnshire Wolds Research Project focused on the multi-period site straddling Nettleton and Rothwell parishes on the Caistor High Street (2013), and I look forward to the concluding volumes of this project.

It has long been thought by the North East Lincolnshire Archaeology and Local History Society that the northern Wolds and Marsh lands of Lincolnshire have a hidden story to tell about the archaeology and history of the late Iron Age through the Roman period into the early Anglo-Saxon era. This isolated corner of the county appears to have been passed by with all the emphasis being on Lincoln and the Ermine Street leading to the Humber. Yet frequent stories from casual field walkers and metal detector enthusiasts indicated that this area had been heavily populated during this period.

The eastern escarpment of the Wolds, overlooking the northern marshes bordering the Humber estuary and in particular the chalk stream valleys have been a favoured area for rural farming settlement since pre-history. Then, as now, it is a prime cereal growing area.

In the early 2000s our attention was drawn to the Waithe Beck valley with the beck rising from a number of sources at the head of the valley near to Binbrook and discharging into the Humber Estuary near to Tetney. As a result of this a number of locations have been identified as possible sites of interest, in particular the site at Hatcliffe Top on the eastern escarpment abutting the Barton Street and overlooking the marshland to the Humber. An assessment of casual finds led to a detailed field walking of the site which produced a large number of finds reinforcing the view that this was a site of some interest.

The Society was planning further investigation work at the site when the vagaries of the English weather, in August 2007, saw the Society come into contact with Dr Steven Willis which was the start of a working relationship that has grown in strength ever since with the University and Society working in close harmony in a programme of fieldwork encompassing the whole of the Waithe Beck Valley, taking in the High Street at Otby Top and Mount Pleasant. This work has also identified another significant site, previously unrecognized, on land adjacent to the Waithe Beck at Brookenby, near Binbrook. This site is subject to an ongoing investigation, which would suggest the presence of a high status Romano-British settlement.

A seminal archaeological fieldwork project at Hatcliffe Top, and a research perspective encompassing the whole of the Waithe Beck Valley, is laying the foundations for the potential of a unique investigation into a hitherto unknown series of early farming settlements in this district of the Wolds. The investigations reported here reveal a well organised and complex agricultural settlement from the mid-Roman to the early Anglo-Saxon period.

This project is not only an important archaeological research undertaking but has highlighted the benefits to be gained from the coming together of the University and Society forming a close working partnership which has seen the two groups, to the mutual benefit of both, forming a close working relationship. The coming together of the youth of the students with the maturity of the society members has seen all involved gain not only academically but through the personal interaction of working closely together, a better understanding of how such a partnership can form a potent research focused working group, as well as a deeper personal understanding between those taking part.

The Society looks forward to this partnership continuing into the future and forming the platform for similar joint opportunities.

David Robinson

Chair, The North East Lincolnshire Archaeology and Local History Society

Acknowledgements

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Local volunteers/members of the North-East Lincolnshire Archaeology and Local History Society:

Peter Akines†, Peter Allen, Gwen Bain, Alice Beasley, Sue Beasley, Darren Campbell, Jean Childs, Colin Coates, Chris Crookes, Alan Daws, Peter Farmry, Neville Greenwood, Dennis Guerin†, Gareth Holburg, Kerry Jones, Stan Little, John Millar, Hugh Nott, Penny Nott, Jan Patterson, Des Pearce, Mike Pounder, David Robinson, Paul Smith, Vic Waller, Brian West, Trevor Whitfield, Alex, Alison, Gillian, Patrick and Susan, Ron, Sally.

University of Kent students: Dr Andy Bates, Dr Elizabeth Blanning, Joanna Boatfield, Melissa Dabbs, Ian Dawes, Natalie Dent, Eleonora Falesiedi, Lauren Figg, Lisa Forrest, Georgia Goldsmith, Karl Goodwin, Gavin Green, Enid Guéné, Marion Gurr, Naomi Hayes, Kristina Heath, Emma Jackson, Karla Kedzierski, Shervelle Kennelly, Robert MacClean, Tina Manahai-Mahai, William Reed, Vicky Ryan, Emma van der Velden, Graham Woolley.

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Elizabeth Blanning/Cate Davies: Figure 1.2.

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Cate Davies/Steven Willis: Figures 2.1, 3.13, 4.11, 4.12, 4.13, 4.14, 4.17, 4.18, 4.34, 9.1, 9.2, 10.1, 11.1, A.1.

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Caroline Farquhar: Figures 7.33, 7.34, 7.35, 7.36, 7.37, 7.38, 7.39, 7.40, 7.41, 7.42, 7.43, 7.44, 7.45.

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Paul Hildreth/Elizabeth Blanning: Figure 1.5.

David Holman: Figures 7.29, 7.30.

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James Rackham: Figures 8.2, 8.3.

David Robinson/Steven Willis/Cate Davies: Figure 3.10.

David Robinson/Steven Willis/Lloyd Bosworth/Cate Davies: Figures 3.4, 3.5, 3.6.

Ian Rowlandson/Hugh Fiske: Figures 6.6, 6.7, 6.8, 6.9, 6.10, 6.11.

Elizabeth Somerville: Figures 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 8.10.

Steven Willis: Figures 3.7, 3.8, 3.9, 9.5, 9.6, 11.13, 11.14.

Steven Willis/Linda Bosveld/Cate Davies: Figure A.1i and iii.

Steven Willis/Lloyd Bosworth: Figures 3.15, 3.16, 3.17, 4.1, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 11.10, 11.11, 11.12, 11.19, 11.20, 11.21.

Steven Willis/Lloyd Bosworth/Cate Davies: Figures: 4.2, 4.3, 4.4, 4.5, 4.7, 4.8, 4.9, 4.15, 4.16, 4.21, 4.22, 4.24, 4.25, 4.28, 4.29, 4.31, 7.20, 7.25, 11.2.
 Hugh Winfield: Figure 1.4.

Photography

Lloyd Bosworth: Figures 2.8, 5.2, 5.3, 6.5, 7.1, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9, 7.10, 7.11, 7.12, 7.14, 7.16, 7.17, 7.18, 7.19, 7.21, 7.22, 7.23, 7.24, 7.26, 7.27, 7.28, 7.31, 7.32, 9.4, 11.16, 12.1, A.2.
 Steven Willis: Figures 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.9, 3.2, 3.14, 3.18, 4.6, 4.10, 4.20, 4.23, 4.26, 4.27, 4.30, 4.32, 4.33, 9.8, 9.9, 10.2, 10.3, 10.6, Back cover top and third photos.
 Elizabeth Blanning: Front cover. Mike Pounder: Figure 4.19, Back cover fourth photo. Frank Lockwood: Figure 11.15. Stan Little: Figures 10.4, 10.5, Back cover second photo. Ian Rowlandson: Figure 6.2. Colin Coates: Figure 3.11. Colin Smale: Figure 11.18.

Shorter contributions: Jon Daw; Dr Toby Martin.

Specialist note: Dr Helen Geake and Dr Richard Hobbs.

Permissions and Access: James Walker and family; Jonathan Fenwick; Peter Kirke.

Information and advice on the North-East Lincolnshire HER and other resources, lithic collection and research; local information: Hugh Winfield†.

Information on the NELALHS Fieldwalking 2004/5: Brian West and Colin Coates.

Logistics, accommodation and support: Gwen and Walter Bain, Paul and Flora Bennett (Brackenborough), Jean Childs, Jane Cowgill, Emma Jackson, Irene Kendall (Wold View), James Rackham, Beverley and Roger Woodward (North Somercotes), Jill Willis, Willow Lakes.

Portable Antiquities Scheme information: Martin Foreman (Finds Liaison Officer, Northern Lincolnshire); Dr Elizabeth Blanning; Dr Adam Daubney (Finds Liaison Officer, Lincolnshire).

Tithe Cartographic Research: Colin Coates.

Information on the site at Glebe Farm, Barton-upon-Humber: Peter Didsbury and Ken Steadman.

Documentary research: Nicola Walkerley and Hannah Dabill (whilst University of Kent undergraduates), and Jon Daw (whilst a University of Kent Masters student).

Conservation: Dana Goodburn-Brown; Jennifer Jones; Graham Morgan.

Materials Analysis: Dr Victoria Mason.

Processing and sorting of samples collected for environmental analysis: Angela Bain and Trude Maynard.

Geological Consultant: Paul Hildreth.

Local information: Steve Allenby; Colin Coates; Graham Collins; Jonathan Fenwick; Roger Stephenson.

Information on Anglo-Saxon Lincolnshire: Dr Kevin Leahy.

Information on Roman mortars: Dr Ruth Shaffrey.

Information on the land snail shells: Dr Liz Somerville.

Academic Advisor: Dr Pete Wilson.

Page Setting and Design: Cate Davies.

Production Management Advisor: Victoria Ridgeway.

Résumé: Translation prepared by Sophie Chavarria and Sonja Willems.

Assisted by grants from: The Roman Society, The Royal Archaeological Institute, The University of Kent.

North East Lincolnshire Museums Service Accession No. GRIMS:2019.034

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Summary

This volume is the first of two examining the archaeology of the Waithe valley as it passes through the central Lincolnshire Wolds. This initial volume mainly concentrates on fieldwork and finds at the eastern edge of the Wolds just before the Waithe progresses to the Marshland. The study was undertaken as part of the Central Lincolnshire Wolds Project which is examining a landscape little explored archaeologically but which holds important evidence and potential.

This volume documents the development of the human presence and use of the valley and its tributary systems, noting the known archaeological and historical evidence from prehistory to recent times in its various forms. The attention then focuses on the archaeological evidence from Hatcliffe Top and surrounding area, on the eastern Wolds margin. The archaeological site at Hatcliffe Top itself lies in North East Lincolnshire (NGR TA 229 021) presently in a cultivated arable landscape. Here geophysical survey, fieldwalking and targeted excavations between 2005 and 2016 revealed an intensively used complex of the later Roman era. The site lies immediately above the north-south access route known as Barton Street, which runs parallel with the eastern edge of the Wolds, as it crosses the Waithe Beck. Now designated the A18, Barton Street is conventionally believed to have been an ancient routeway and is, for instance, shown by Todd, May and Whitwell as a Roman road with likely pre-Roman origins (Todd 1973, fig. 8; May 1976, 9, fig.4; Whitwell 1982, fig. 8; 2001, 15). Following systematic fieldwalking, the excavation of a trial trench and assessments of the collected archaeological finds, six excavation trenches were opened and entirely hand dug as a research and training exercise. The fieldwork was a joint undertaking combining teams from the University of Kent and The North-East Lincolnshire Archaeology and Local History Society (NELALHS). The work was directed and led by Steven Willis and David Robinson. Research and training, plus the free opportunity to participate in the discovery and learning process, were key aspects of an initiative that combined experienced fieldworkers, those enhancing their skills, students, volunteers and beginners. The work revealed comparatively well-preserved remains spanning the mid- to Late Roman period with a range

of artefactual evidence for the use of the site in the Anglo-Saxon period. The main evidence dates to the fourth century, especially the later fourth century, an era when the site would, by conventional narratives, have been on the front line of the Roman Empire, facing barbarian incursions from the North Sea.

The excavations revealed and sampled ancient features consistent with the extensive pattern of anomalies detected by geophysical survey. The work principally mapped a coherent Late Roman settlement and field system with associated enclosures. Geophysics showed anomalies to be extensive across the areas surveyed with the suggestion of earlier use of the location in later prehistory, pointing to a longer sequence of use of the location. The Roman period evidence included a series of ovens, including comparatively well-preserved examples, some of which at least were associated with corn-drying, plus a likely threshing floor and associated deposits rich in archaeobotanical carbonized remains. Preserved cereal grains and other elements indicate crop-processing, with a range of crops identified. Faunal remains indicate livestock raising, with a likely focus upon cattle and probably horses. Examination of these various assemblages provides an understanding of the landscape and economy of this later Roman farming complex and something of the wider 'commercial' regime. Systematic metal detecting across the site assisted in the recovery of over one hundred and eighty coins, the large majority of Roman date. These, plus other metalwork, are reported, together with stratified pottery sequences.

Two nearby locations with further evidence of Roman date are also reported. A site known from surface finds on the opposite side of the valley to the complex at Hatcliffe Top, in the parish of Beelsby, is considered, having produced coins and pottery of Roman date and a Cumbrian stone implement of Neolithic date. Surface finds from the area of Round Hill by Hatcliffe village are also reported, including a likely non-literate curse tablet. Overall, the discoveries are fully presented and their interpretation is discussed and set against the broader historical and archaeological context, bringing together the emerging archaeological picture for a landscape hitherto hardly explored.

Chapter 1

The Lincolnshire Wolds and the Physical Setting of the Study Area

Steven Willis

1.1 The Lincolnshire Wolds: Landform, Character and Modern Use

The Lincolnshire Wolds lie on the eastern side of Lincolnshire being an area of higher undulating land between the lower flatter landforms of the Lincoln Clay Vale to the west and Middle and Outmarsh (Marshland) to the east, bordering the North Sea (Robinson 2009a). Formed mainly of chalk, sandstone and limestone, together with clays and ironstone, the Wolds extend from the Humber to the Lincolnshire Fens in a linear belt aligned approximately north-west to south east, extending for c. 70km by 15km wide. With a highest point of 168m near Normanby le Wold, the Wolds are tilted with a western scarp and a dip-slope to the east. Geology, glaciation and human interventions have created an environment of rolling open downs, sometimes steep, sometimes gentle and broad, valleys, chalk streams and large fields, now predominantly under arable cultivation. The Wolds were designated an Area of Outstanding Natural Beauty (AONB) in 1973, recognizing the distinctive, rural ecology and cultural-historical landscape they represent.

The Lincolnshire Wolds and the Waithe valley are today an intensively cultivated and managed agricultural landscape, with arable predominant, with some sheep but few cattle. Except where over glacial till the soils of the Wolds are generally light and relatively easily ploughed. The wool industry was very important in previous centuries with fields in rotation to include sheep grazing and fodder, particularly turnips (Rawding 2001, 14-5, fig. 4). The Wolds were distinctive at this time in the raising of sheep and in the proportions of different arable crops grown, especially, in terms of cereals, with the landscape, elevation and climate favouring barley and oats (cf. Rawding 2001, 14). Indeed the 1841 Tithe

record for the Parish of Hatcliffe notes oats as the major cereal being produced, accounting for 48% in terms of bushels, with barley at 33% and wheat 19%. This economy of raising sheep and 'High Farming' (cf. Rawding 2001), generated wealth, at least for some, which was expressed in several fine estate houses and associated parks, and in church embellishments. The Waithe Beck meanders past several such estates, though elsewhere its waters were put to productive use through construction of watermills, established at several locations and prominent in the historical and cartographic records. These mills were for grinding grain and are recorded and/or extant at Orford, east of Binbrook, Hatcliffe village, Waterdell and Waithe, with the windmill at Waltham open to the public (see below 2.3.4). Sheep came to be increasingly replaced by arable. Mechanization, especially combine drilling, and the introduction of herbicides meant large-scale cereal production was more profitable. Barley is a major crop on the Wolds, often of top quality (Rae 1978, 121). Barley, past and present, is a hardy grain and can withstand the lower temperatures, dry conditions and low fertility of the thin chalk soils of the Wolds uplands, to which wheat is less suited (cf. Rippon 2013, 132-3; Zohary *et al.* 2012, 52).

The current arrangement of the landscape is largely a product of the Enclosures, the records for which the much revered local historian Rex Russell and his assistants did so much to collate and assess. The Enclosures resulted in rectilinear fields divided by hedges, straight roads and tracks often punctuated with placed trees, with 90 degree turns and centrally placed 'Top Farms' (cf. Willis 2013, section 1.12). Bocock stated that "... many of the old field boundaries ... were frequently situated on changes of soil type" (Bocock 1978, 126), though measured alignments arising from the 'rationality' of Enclosure have clearly been determinants in the placement of many field boundaries. Now, with

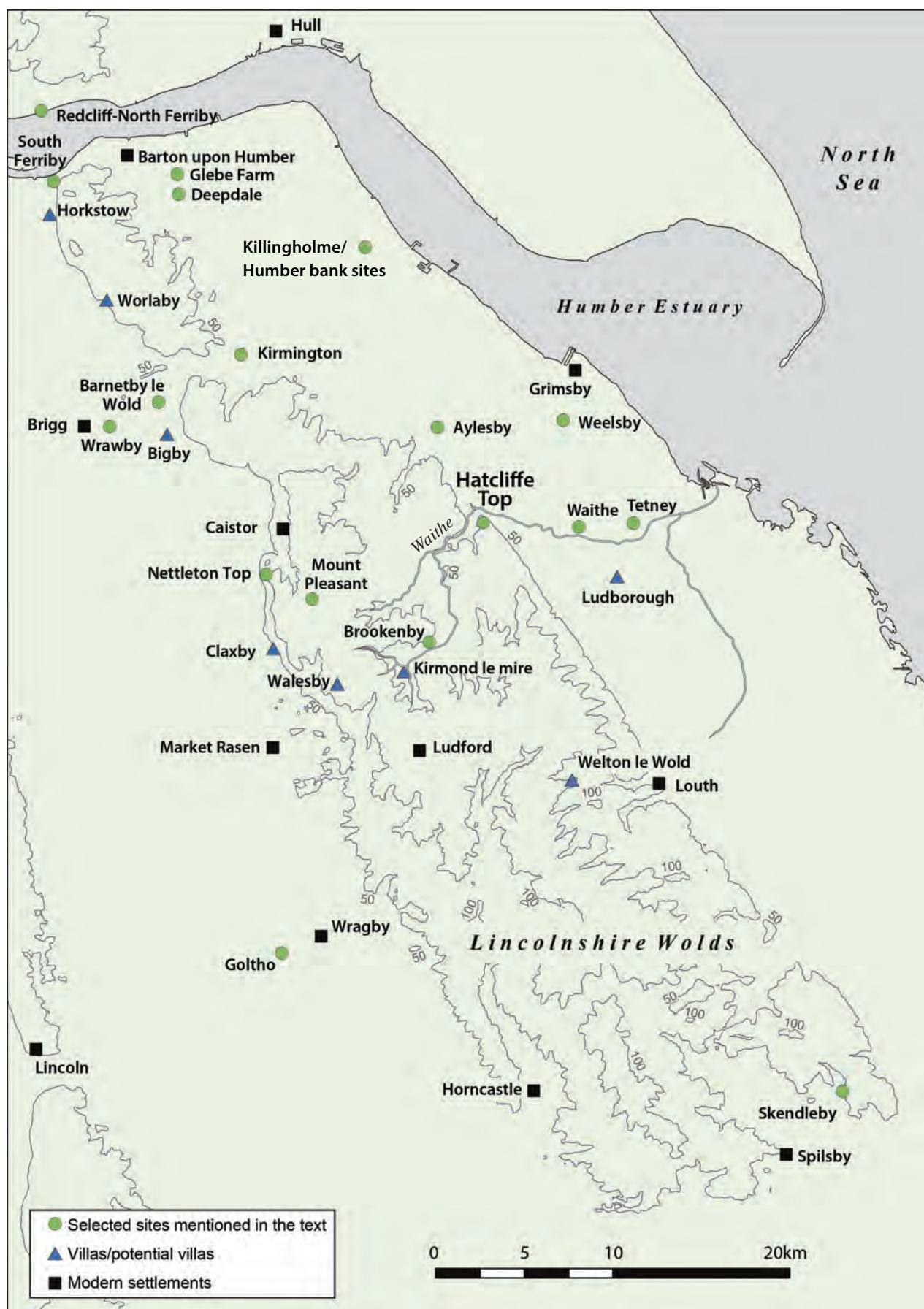


Fig. 1.1 Location of the Waithe valley, showing the topography of the Lincolnshire Wolds and other sites in the vicinity, together with selected modern settlements.

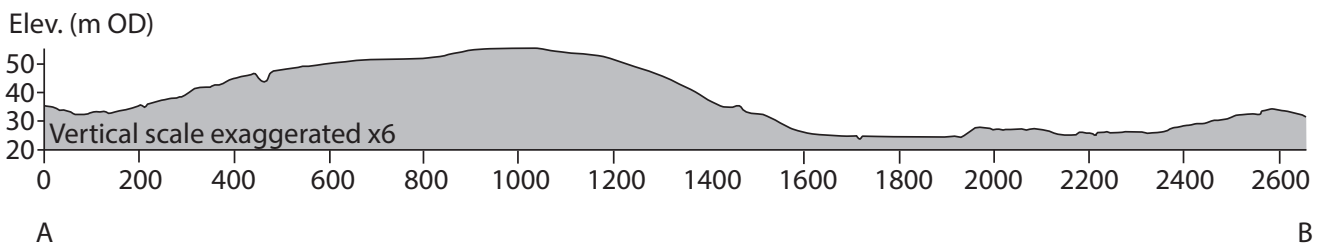
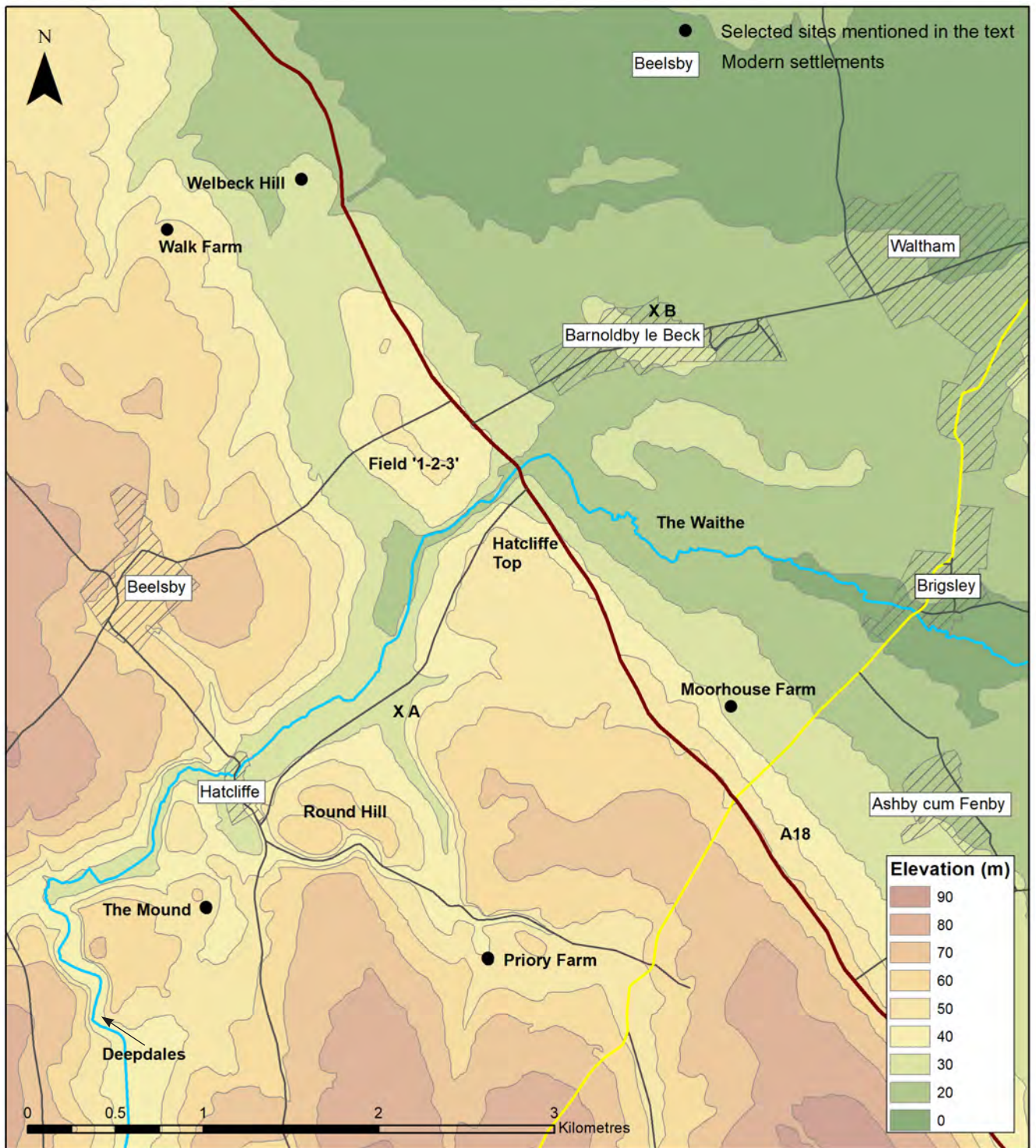


Fig. 1.2 The Waithe valley as it leaves the eastern side of the Wolds and enters the Marshland, showing sites mentioned in the text, together with modern settlement. An elevation profile is shown between points A and B.

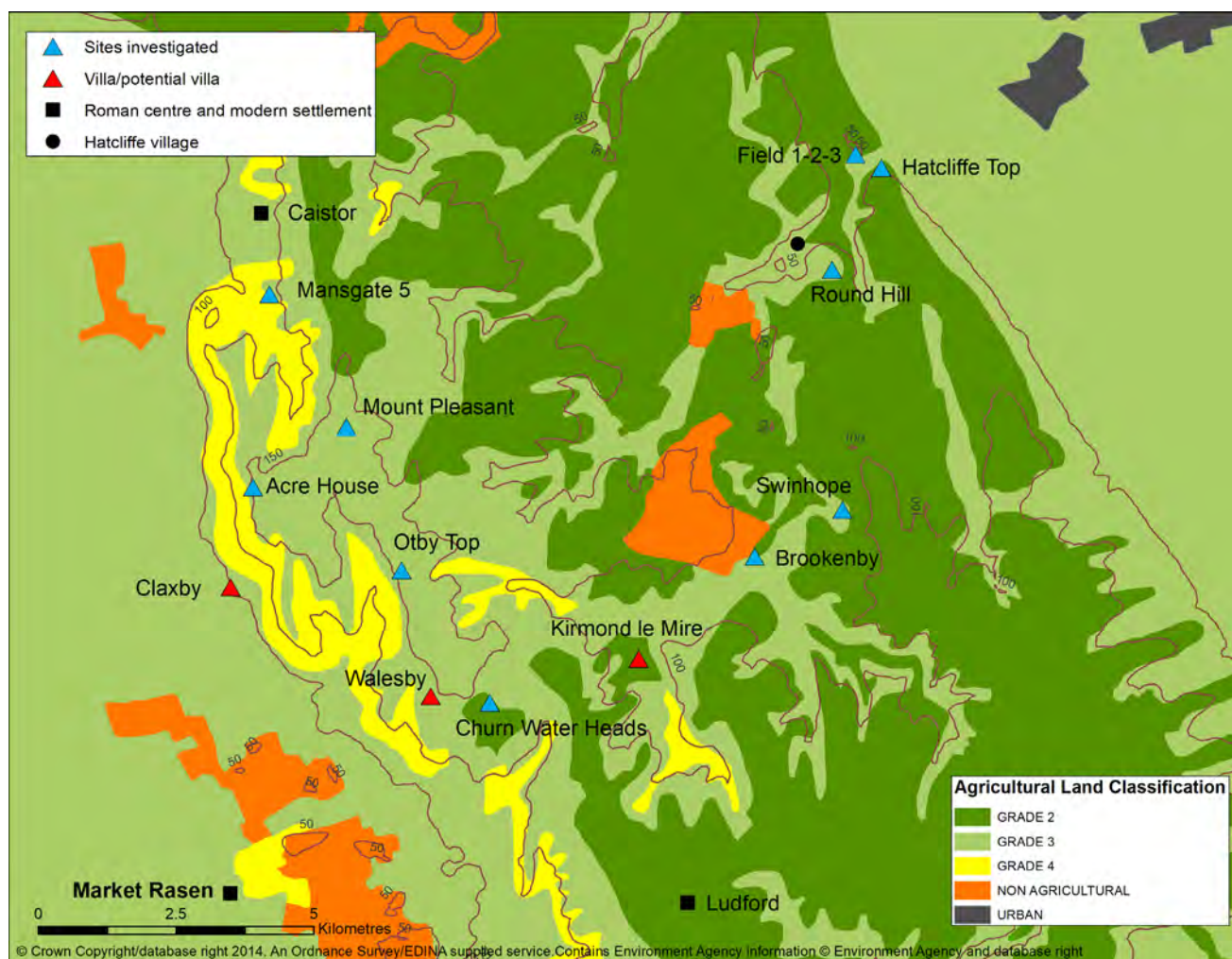


Fig 1.3 Agricultural land classification for the Waithe valley through the Lincolnshire Wolds and surrounding area. Sites investigated as part of the Central Wolds Project are shown, together with other selected locations. (Prepared using data that is © Crown Copyright/database right 2011; an Ordnance Survey/Edina supplied service)

far fewer sheep there is a predominance of barley and wheat cultivation (some 70% of land being for such cultivation in 2000), on rotation with beet crops, beans, peas and oil-seed managed by hi-tech systems and heavy mechanization (cf. Jones 1988, 6-7; Tyszk 2000, 34); these days the farming community has to be very responsive to central policies, markets and economics and so changes in cropping and emphasis are common. Post-war hedge clearance and tree removal that followed from increasing mechanization was restricted from the 1970s once the Wolds district was designated an AONB. Today fields are large, unless topography dictates a smaller scale, with many exceeding 40 ha (100 acres). Nonetheless, fossil remnants of former agricultural regimes survive in places, particularly areas of rigg and furrow cultivation, either as upstanding remains (in areas since switched to and remaining under pasture) or as cropmarks. This is especially so both on and off the eastern fringe of the

Wolds, as for example, between Beelsby village and Irby Holmes Wood, as well as by Hatcliffe village (both examples on the Wolds), and around Brigsley village and along the north bank of the Waithe Beck, to the east of the village, on the Marshland (Loughlin and Miller 1979, 165). On the Marshland, the vicinity of the Waithe has historically been an area of mixed farming (e.g. Stamp 1942).

The unstable and steep scarp edge above the Clay Vale is suitable only for grazing with some plantation tree cover, and is accordingly designated Grade 4 land; cattle are raised on these slopes but sheep are more common. The steepest slopes of the Wolds valleys, occurring near their spring-head points, are also Grade 4 land, as around the headwaters of the Waithe west of Stainton le Vale and south of Kirmond le Mire, where the springs have cut back into the geology due to 'spring-sapping' and/or post-glacial run off (cf. Monkhouse 1986, 128). These sides are generally assigned to grazing or are wooded. The majority of the dip slope, however, to

the east, through the central Wolds, comprises rolling downland, gentler undulating and flatter plateau areas and is Grade 2 land. This includes the location of the Hatcliffe Top site reported here (Fig. 1.3). The less readily ploughed valley sides that are not too steep are Grade 3. In terms of the Marshland much of the area in the vicinity of the Waithe is Grade 3 but the land is graded 1 and 2 east of Tetney.

The amount of present woodland is described by Jones, in his statistical review of contemporary land use in this area of Lincolnshire as 'slight' (Jones 1988, 7), a fact that is confirmed by the most recent data: only 4.5% of the area covered by the Lincolnshire Wolds AONB is wooded (lincswolds.org.uk/living-in/trees-and-woodland, November 2017). Woodland is now generally found on steeper valley sides (meaning the majority is on the western side), in areas of planation for game and fox cover and as wind breaks, and in rare clumps on the higher plateau. The statistic mirrors an earlier pattern of clearance; in the 11th century only 5% of Lincolnshire was wooded (Platts 1985, 96; cf. below 11.6.8.3 for a discussion of the possible implications). Countryside Stewardship arrangements had in recent years gone hand in hand with some tree planting in slope environments, but this has been limited. Woodland noted on the 19th century tithe maps has been removed in some locations as with a relatively large area of woodland labelled 'Fox Cover' in the north-east of Beelsby parish near a likely set of round barrows (at TA 223 029).

The main arterial roads include the Caistor High Street (B1225), running north-south along the western ridge of the Wolds, above the escarpment, and the Barton Street (A18) running north-south below the eastern fringe (Ulmschneider 2000, 59), with the A16 taking the course south from north of Louth. These were main drove roads. Crossing the Wolds are the A46, which runs past Caistor to Laceby and then on eastward to Grimsby, the Wragby to Louth A157 route, the A631 from Market Rasen to Louth via Ludford, and the Bluestone Heath Road crossing the southern central Wolds. All were important medieval routes, probably with prehistoric origins. The sole putative stretch of specifically Roman road in the vicinity of the Waithe valley on the monument record is a short stretch east of Binbrook running in a line east-west (TF 2185 9404 to TF 2295 9410, Monument no. 1055056; another reference, HER Number 44575 centred at TF 224 940 seems a duplicate). This is known from cropmark indications and is not verified via excavation or ground survey. Excavations at the Nettleton/Rothwell Roman site demonstrated that the modern arterial B1225 must overlie an equivalent Roman road (Willis 2013).

1.2 The Lincolnshire Wolds: Geology, Soils and Climate

1.2.1 Geology, Topography and Drainage

Hatcliffe Top and the Waithe valley lie within the north central area of the Lincolnshire Wolds, an upland area formed of Cretaceous geology with Pleistocene and Recent deposits (Robinson 2009b). The Lincolnshire Wolds are comprised of gently tilted strata (dipping broadly to the east), composed mainly of chalk, rising to 168m OD (near Normanby-le-Wold), with the site at Hatcliffe Top located at c. 48m OD. The Wolds and its western chalk escarpment run generally north-west to south-east. Above the escarpment, to the east, the dip-slope is an area of frequent valleys, dendritic in arrangement and often steep-sided, draining mainly eastwards. Nonetheless, the dip-slope in the round is moderate in inclination. Whilst there are often sharp interfluve ridges separating valleys, in between a number of these valleys there exist broad and often flat expanses of plateau (cf. Robinson 2009b, 5). Several were sufficiently flat to have accommodated airfields during the Second World War and after, as at three sites in the vicinity of the Waithe valley, namely Binbrook (Brookenby), Kelstern and Ludford (Halpenny 1981, 42-7, 115-8 and 130-3 respectively). The sharp valleys cut deep into the chalk and in some cases, as with the Waithe valley, through it to underlying strata of clay and Carstone at their bases. In the bottom of the lower valleys springs issue feeding chalk streams.

The site at Hatcliffe Top, reported in this volume, overlies the Burnham Chalk (formerly known as the Upper Chalk). This comprises a white chalk with characteristic tabular masses (bands) of flint and is around 27-50m thick as an exposure on the Wolds (Berridge and Pattison 1994, 32, fig. 18; Robinson 2009b, 5, fig. 7). Blocks and splinters of the comparatively brittle tabular flint occur in the modern ploughsoil at Hatcliffe Top and in archaeological features at the site. Whilst it has been eroded and lost from much of the Wolds to the west, where it will have been more exposed due to the tilting of the geological strata, the Burnham Chalk is still widely present along the eastern dip-slope margin, as for instance near Ulceby and Louth (cf. Heaven 1978, 5; Berridge and Pattison 1994, 32). Parts of the formation of this chalk can indeed be seen in quarry faces, now disused, that are more local to Hatcliffe Top, as at Priory Farm, south of Round Hill, adjacent to the road known as The Avenue, West Ravendale, and in the grounds of

Table 1.1 Borehole evidence in the vicinity of Hatcliffe Top from the British Geological Survey records online (viewed November and December 2015; December 2017). DCR: Depth etc. recorded by the BGS as 'Confidential or Restricted'.

Bore-hole	BGS Location	NGR; Depth; and Depth below surface water level encountered	Position	Date	Practitioner and purpose	Strata and thickness (top to bottom) (Imperial converted approx. to metric)
1	TA20SW33	521390 400630. 2.5m	On S side of Hatcliffe village	17.3.73	Holst Soil Engineering. Sewerage	"Made ground – bricks and soil etc.": 0.2m "Stiff brown sandy CLAY with chalk fragments and sand bands": 1.9m "Dark brown clayey stoney SAND": 0.4m
2	TA20SW7	521330 400740. 27m 4.2m	In Hatcliffe village at 'Oakdene' by the Waithe beck, N of church	March and Oct. 1937	F. Smith and Son, Grimsby Well	"Soil": 0.5m "Marl clay": 3.3m "Chalk borings": 0.9m "Chalk": 22.7m
3	TA20SW32	521390 400810. 2.5m <i>Not reached</i>	In Hatcliffe village by the valley floor	18.3.73	Holst Soil Engineering. Sewerage	"MADE GROUND – Soil, stones, clay, bricks, etc.": 0.5m "Firm dark brown sandy CLAY with chalk fragments": 1.4m "Chalk fragments brown silty sandy CLAY": 0.2m "Stiff dark brown sandy CLAY with occasional stones": 0.4m
4	TA20SW30	521520 400910. 6m 2.8m	A short distance E of Hatcliffe village by the valley floor	18.3.73	Holst Soil Engineering. Sewerage	"Brown sandy CLAY with chalk fragments": 0.6m "Stiff brown sandy stoney CLAY with occas. chalk fragments and boulders": 2.1m "Brown silty SAND with chalk and flint fragments": 1.2m "Firm dark grey brown silty CLAY with chalk fragments (Boulder Clay)": 2.1m
5	TA20SW29	522190 401350. 2m	By Waithe Beck midway between Hatcliffe village and Waterdell	17.3.73	Holst Soil Engineering. Sewerage	"Chalk fragments (Fill?)": 0.7m "Firm brown sandy CLAY with occasional chalk fragments": 1.3m
6	TA20SW58	522540 402060. DCR	By Waithe Beck, on the valley floor on N side of Quarry Pit Field	c. 1991	High pressure gas pipeline (Theddlethorpe to Killingholme)	DCR
7	TA20SW9	522920 402430. 32.6m 10.2m	By Waithe Beck at Waterdell (Hatcliffe) Mill, ("in engine shed SE of leat")	1925	C.W. Dixon Ltd, Builders. Construction	"Soil": 0.6m "Loose chalk": 3m "Hard white chalk": 9.1m "Cavity ... chalk": 4m "Hard chalk": 1.5m "Crusty chalk": 1.5m "Hard white chalk": 12.8m

Bore-hole	BGS Location	NGR; Depth; and Depth below surface water level encountered	Position	Date	Practitioner and purpose	Strata and thickness (top to bottom) (Imperial converted approx. to metric)
8	TA20SW28	522980 402510. 3m	By Waithe Beck at Waterdell, next to the A18	17.3.73	Holst Soil Engineering. Sewerage	"Topsoil": 0.3m "Firm brown sandy CLAY with chalk fragments": 1.6m "Brown clayey stoney SAND with chalk fragments": 0.3m "Weathered CHALK": 0.8m
9	TA20SW10	A duplicate record of the following record.				
10	TA20SW39	523430 402160. 36.5m 6.9m	By Waithe Beck east of the A18, in former parkland by the SE edge of the field opposite Stable Field	16.9.47	The bore was to deepen an existing well of 1925 for Mr Dawson, of Park House (a previous farmer at Hatcliffe Top)	(Existing) "Well": 1m "Gravel": 2.7m "Marl clay": 7m "Dirty sand and gravel": 12.7m "Silty clay": 2m "Gravel": 0.6m "Dirty chalk": 5.7m "White chalk": 4.9m
11	TA20SW31	521280 401130. 2m	N of Hatcliffe village in the dry valley towards Beelsby	17.3.73	Holst Soil Engineering. Sewerage	"Brown sandy CLAY with chalk and flint fragments": 0.9m "Weathered CHALK": 1.1m
12	TA20SW59	521980 402480. DCR	S of the Beelsby Road, N of the former Low Fields	c. 1991	High pressure gas pipeline (Theddlethorpe to Killingholme)	DCR
13	TA20SW57	522660 401910. DCR	By the Hatcliffe Road; near top E corner Beck Field	c. 1991	High pressure gas pipeline (Theddlethorpe to Killingholme)	DCR
14	TA20SW56	523280 400970. DCR	On S side of Third Street Field, N of Ravendale Top	c. 1991	High pressure gas pipeline (Theddlethorpe to Killingholme)	DCR
15	TA20SW08	522560 4000110. 30m <i>Not reached</i>	N of Priory Farm, West Ravendale	May 1940	Vickers and Sons. Well boring (abandoned)	"Soil": 0.3m "Marl clay": 4m "Sand": 0.3m "Chalk rubble": 3m "Hard white chalk": 22.8m

Oaklands Hotel on the A18 near Laceby, where the tabular flint banding is apparent; in the Waithe valley below Hatcliffe Top, it had been visible at the former quarries at Waterdell and at the west end of Mill Close Field (Fig. 1.5).

Along the eastern edge of the Wolds is a line of former sea cliffs (Fig. 1.5). The chalk cliffs were created in the later Ipswichian Interglacial era between c. 125,000 and 115,000–75,000 years ago. Rising sea level, to 3–5m above present levels, brought the North Sea to the eastern edge of the Wolds. Erosive wave action generated cliff faces, a wave cut platform and flint beaches, most evidently in the area north of Louth to Laceby (Berridge and Pattison 1994, 43; Robinson 2009b, 7). The cliffs are now masked by subsequent covering deposits arising from subsequent glaciation, weathering and colluviation but nonetheless remnant cliff edge is discernible from some points of relative steepness as one moves from the lowland of the Middle Marsh onto the skirt of the Wolds. This is apparent, for instance, on the road from Brigsley up to the A18 at Ashby Hill, where the final three hundred metres rise by 20 metres, and likewise with the road to the south from the hamlet at Waithe to the A18. The cliff is apparent too from LiDAR survey data with a hillshade transformation, where it can be seen in the fields immediately east of the A18 below Corner Field and Stable Field at Hatcliffe Top, and above the Waithe Beck (cf. Chapter 3; Fig. 1.4, noting the consistent eastern edge to the Wolds).

1.2.2 Glacial Till Deposition

During the Wolstonian and Devensian stages of the Pleistocene era ice extended onto the area of the Wolds. This led to the deposition of a blanket of till (glacial drift) deposits. In the period of the ‘Wolstonian complex’, approaching 250,000 years ago, glaciation ice that had moved south from the area of what is today the North Sea spread an extensive till, exposed when it retreated. Whilst its precise composition can vary between locales, the characterization of this till in the Donington-on-Bain to Welton le Wold area is fairly representative. Here it is known as the Calcethorpe Till (Straw 1969; Heaven 1978, 5; Robinson 2009b, 6); this is a chalky till, light brown or cream in colour which extended into the Bain valley and as far south as Woodhall Spa (Heaven 1978, 5). Associated with this till is a reddish brown flinty clay which overlies it but which is of uncertain origin (Heaven 1978, 5). The latter is found on high parts of the Wolds over chalk “and it is likely that its present distribution represents the original extent of

the Calcethorpe Till” (Heaven 1978, 5). Heaven noted that whilst the nature of the till is constant through the Donington-on-Bain district “due to the alignment of ice movements and the outcrops of solid formation, a series of differing tills were laid down across Lincolnshire contemporaneously with the deposition of the Calcethorpe Till” (1978, 5–6).

Turning to the subsequent Devensian period, ice flow again extended onto the Wolds from the North Sea area. This is particularly relevant given that the area effected includes that of Hatcliffe Top. Following Straw, there were two glaciations in the Devensian: the earlier reaching a maximum extent c. 45,000 to 40,000 years ago and the later c. 22,000 to 20,000 years ago (Straw 2008, 4; Robinson 2009b, 8). In this later episode, however, it covered only the lower slopes of the eastern edge of the Lincolnshire Wolds, south to The Wash. This was the source of the Marsh Tills which form a carpet cover across much of eastern, low-lying, Lincolnshire. These tills comprise reddish brown and purplish brown clays, with a variable erratic stone content, and are continuous with similar glacial spreads north of the Humber; they were deposited in two layers indicating that formation was not a simple process (Straw 1969; 2008; Heaven 1978, 7). Considering the immediate environs of the Hatcliffe Top site, only the Upper Marsh Till is found on the eastern edge of the Wolds, this being on the lower slopes and in some valley floors (see further below; Heaven 1978, 7–8; Straw 2008). At the junction of the Wolds with the till over the Marsh spring points can occur, as is the case with Welbeck Spring by Welbeck Hill just under 3km north of Hatcliffe Top by the A18 (Robinson 2009b, 13).

1.2.3 Periglaciation and Post-glaciation in the area of Hatcliffe Top

Clearly glaciation and post-glaciation have markedly impacted on the eastern side of the Wolds and its eastern fringe, giving rise to a complicated history (cf. Twidale 1956; Straw 2008). This is seen in particular in the area of the site reported here. The glaciations with probably the greatest impact on the current landscape were those that occurred in the Devensian period (cf. above). Around 22,000 years ago the latter ice covered the eastern edge of the Wolds between Brocklesby and Aby. The ice sheet front rose over both the previous till deposits and the part-buried former sea cliffs; in doing so it sheared off the top of the chalk geology (Straw 2008, 14; Robinson 2009b, 11). The sheet then progressed up the east exiting valleys, such as the

Waithe, though this penetration was not as extensive as on previous occasions. Nonetheless, significantly, the ice blocked the flow of water down the Wold valleys; further north it created a further blocking of the Humber, resulting in the creation of a glacial lake. In conditions of severe cold the ground was frozen even in areas not covered by ice, so meltwater and precipitation on the Wolds therefore was not able to drain into the chalk or through the ice in a normal manner. However, Straw suggests that summer probably brought melting of surface snow; he argues that water build-up behind the ice barriers blocking the valley exits to the Marsh created lakes leading to overflow between valley ridges, and water courses over ice and underneath it, with such dynamic conditions lasting centuries. Accordingly, coupled with subsequent ice melt, exiting drainage scoured new valleys and incised old ones (Straw 2008, 4). Associated features included flooding, diversion of water courses and disturbance and movement of soils and loose rock. In time east flowing streams carved fresh escape channels. As the ice gradually melted from this area of Britain some 20-18,000 years ago and diminished, it left complex spreads of sands and gravels, channels and debris in certain places. A build-up of fluvio-glacial deposits survives in the Waithe valley (at around 75m OD) at Gunnerby between Hatcliffe village and Thorganby, where sands and gravels were deposited, marking a former water level associated with this period (Fig. 1.4). The subsequent escape channels incised the chalk and around Hatcliffe (and elsewhere) carved steep-sided valleys as seen today (Straw 2008, 14-6; Robinson 2000, 46; 2009b, 11). Hereabouts the meltwaters were responsible for the steep-sided deep cut valleys and spillways at Irby Dales, Irby upon Humber (Berridge and Pattison 1994, 54, pl. 10), Flint Hill and Deepdales (TF 202 997) (Robinson 2009b, 11) and the strikingly angled valley slopes and flat floor at the approach to Waterdell in the Waithe valley (Fig. 1.4). Another occurs on the south side of the aptly named Round Hill (Fig. 10.1; Straw 2008, 16, fig. 8) south-east of Hatcliffe village (TA 218 004) where the narrow deep channel curves around the hill (Figs 1.4 and 1.5). A little further to the south similar cutting action can be seen between Wold Newton and East Ravendale (Robinson 2009b, 13).

As with previous periods of glaciation the retreating ice left behind huge quantities of rock that had been carried from areas much further to the north and north-east, including hard gneisses, schists, basalt, granite and red sandstones from Scotland and Norway, Whin Sill and siltstones from Northumberland and County Durham. Softer rocks generally did not survive the journey and periglacial processes and were completely disaggregated to grit or dissolved. The

present agricultural soils on the eastern fringe of the Wolds and at the principal site reported here contain mainly glacial pebbles and cobbles of these types often rounded, but typically sub-angular/sub-rounded with smoothed and scratched surfaces and corners, the outcome of glacial abrasion.

Straw had suggested that in the general area considered here meltwaters during the second Devensian glaciation and water from the blocked valleys flowed north along the edge of the ice sheet and then east, with the valleys by Irby and Riby, north of Hatcliffe Top, thereby incised in the periglacial era through the existence of 'slipways' with a fan of glacial gravel debris extending through outwash onto the Marsh at Laceby (Straw 2008, fig. 1). Straw is largely unspecific in his 2008 publication with regard to the Waithe valley between Hatcliffe village to Waterdell (though he shows the beck east of Waterdell as a case of 'other meltwater flow' (2008, fig. 1) but this was evidently a slipway too. The water flow would have been forceful and high, fed by the build-up of meltwater and precipitation cutting into and lowering the ice barrier. Periglacial meltwater flowing through the valley incised it and then emptied over the cliff by Waterdell opposite Barnoldby le Beck (Twidale 1956; Paul Hildreth pers. comm.). This formed not a straightforward deltaic fan of outwash but rather a band of outwash moraine developed, due to the force of the flow and its drainage with time, to the north and especially the south, of the present course of the Waithe (Twidale 1956; Paul Hildreth pers. comm.). This bank is the ridge of chalk gravel and glacial erratics opposite the mouth of the valley, now wooded, to the south of Barnoldby le Beck. Hence this moraine at Barnoldby le Beck, if such it is, is 18-15,000 years old (pers. comm. Paul Hildreth). South of Barnoldby le Beck the Waithe has a marked terrace on its eastern side marking the flood plain of the beck and its subsequent erosion of the lower flank of this post-glacial fan.

Data on boreholes sunk for wells, or in advance of sewage and other pipelines etc. for the area, held by the British Geological Survey is available to study online. Focusing upon the records from the Hatcliffe area provides information consistent with the picture outlined above (reproduced here in Table 1.1). Records from Hatcliffe village (Table 1.1, boreholes 1-4) are consistent with valley bottom deposits of post-glacial silting/accumulation. Two records from the valley edge slopes by the Waithe between Hatcliffe and Waterdell may be suggesting that the chalk is near to exposure at these points (Table 1.1, nos 7 and 11). Borehole 10 shows a completely contrasting profile which is in line with its location (at c. 23m OD) near to the beck but

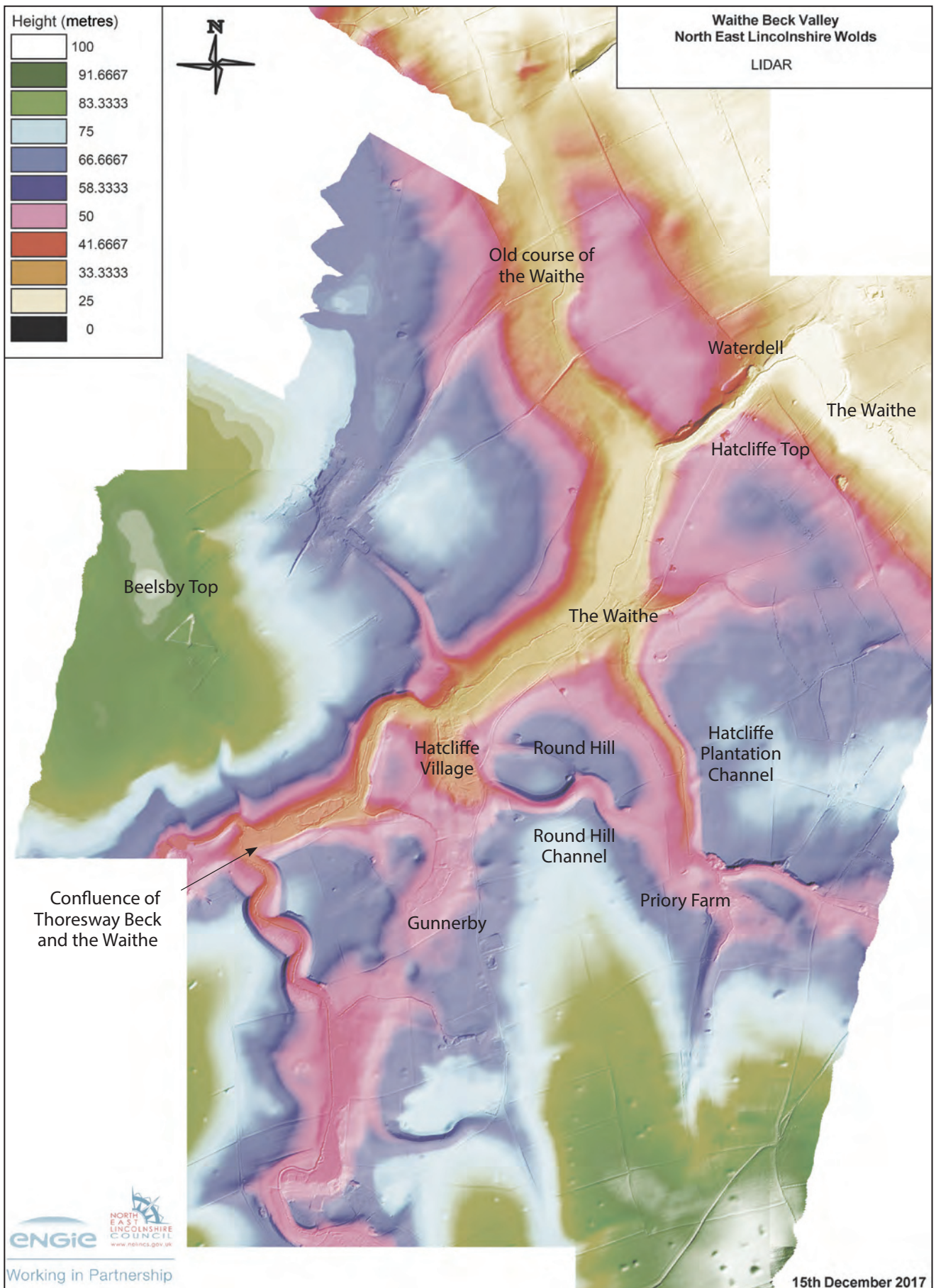


Fig. 1.4 Plot of LiDAR data for the area between Hatcliffe village and Waterdell (as the Waithe exits the Wolds) with annotation of some landscape features and locations.

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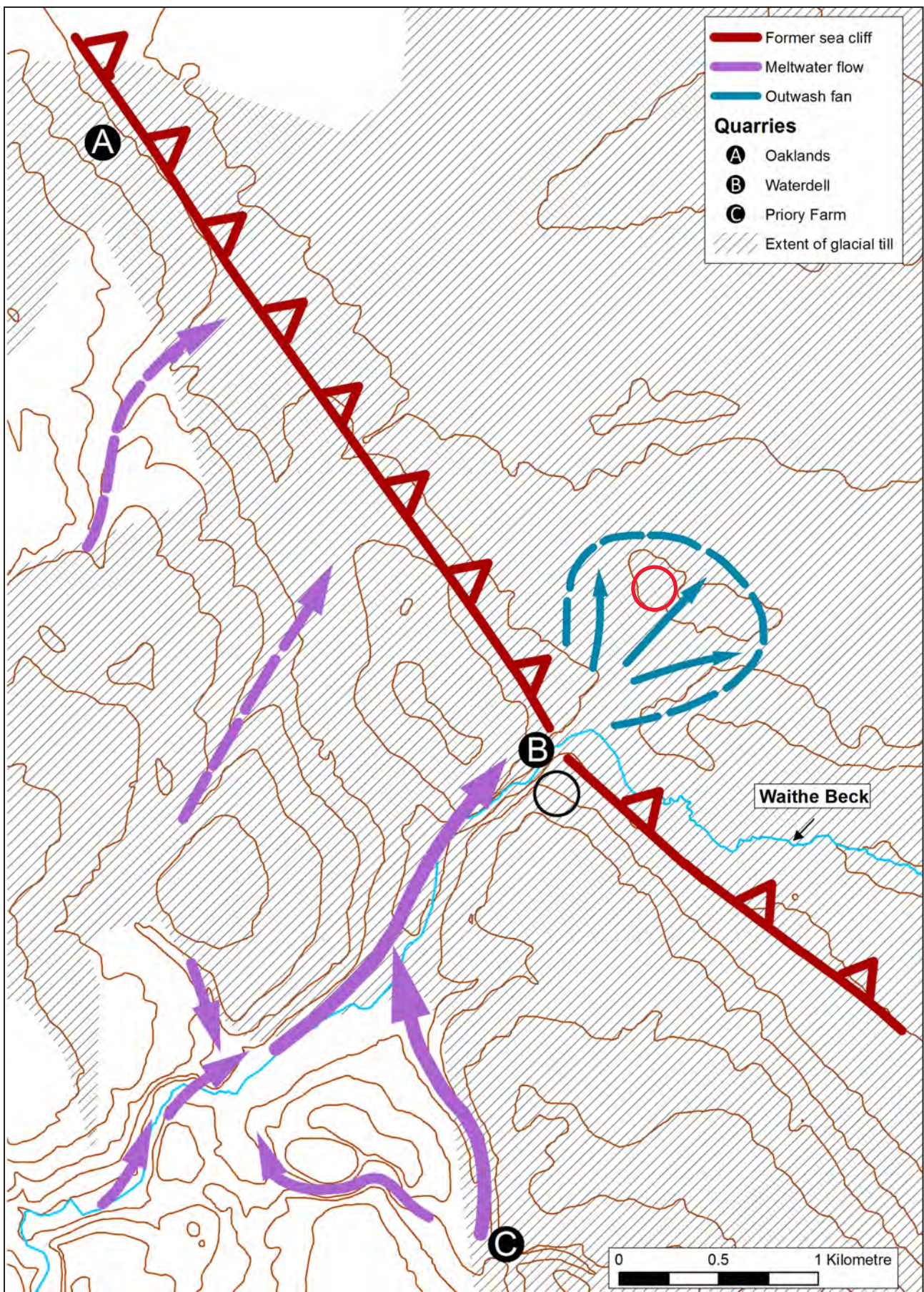


Fig 1.5 Map showing physical geography and quarry sites, with glacial and periglacial features, in the area between Hatcliffe village and Barnoldby (after Straw 2008, with adaptations by Paul Hildreth). The open black circle is the location of the site at Hatcliffe Top reported here; the open red circle locates the village of Barnoldby le Beck.

essentially off of the Wolds, in the area of Barnoldby le Beck Park, opposite Park House and Stable Field; here the deposits are consistent with silting events and outwash off the Wolds. Record 15 is from north of Priory Farm, West Ravendale, in the bottom of the valley area (at c. 45m OD) that approaches the two scoured steep outflow valleys either side of Round Hill (cf. above; cf. Figs 1.4 and 10.1); the borehole sequence here is consistent with post-glacial silting following scouring. Several borehole records are also available for Barnoldby le Beck, (again off the Wolds), around the village and especially on the north side of the road through the village towards Waltham. This is higher ground (c. 32m OD today) and should be the northern fringe of a moraine or outwash ridge if the interpretation of Paul Hildreth is correct (cf. above). The data from the boreholes here is good in terms depth reached; there are no boreholes in the area of the ridge to the south (now partially wooded). Records of boreholes sunk at three locations, namely the old vicarage on the north side of the village to a depth of 45m, at Pelham House on the east side at 45m and at the village pump in the village centre at 53m (mapapps.bgs.ac.uk/geologyofbritain/home.html TA20SW49, TA20SW15, TA20SW48, respectively, accessed 1.12.2017) present a complicated sequence of gravel, sand and clay strata that would be consistent with a slipway outwash sequence creating this ridge.

The plot of the LiDAR data (Fig. 1.4, at 2m resolution) illustrates several of the processes and features mentioned above. It also suggests that the original course of the Waithe, as it left the Wolds, was indeed not via Waterdell. Rather the broad channel indicated by the height data implies the course was in the past more meandering and the exit was not at Waterdell but further north, near to Welbeck Hill. The current course through to Waterdell shows as a relatively short, narrow and steep valley (of c. 0.75km) which would be consistent with a comparatively recent escape channel, as discussed above. The apparent old course of the Waithe, east of the village of Beelsby, as suggested by the LiDAR plot, is comparatively broad and presently has a minor cross ridge at its base which the Beelsby to Barton Street (A18) road takes advantage of in crossing the valley (Figs 1.2 and 1.4, seen as a thin line on the latter). This broad channel is largely drained from this ridge-point by a minor (misfit) stream which runs north to Welbeck Hill and beyond. On the opposite side, to the south-east, is the dip known on the Tithe Map and latterly as Low Fields (more recently incorporated into 'Field 1-2-3' cf. Fig.1.2). Land drainage works since enclosure will have altered the natural pattern to degree hereabouts. As the modern road cuts directly across this broad

channel, with associated hedging, it alters perceptions and the presence of this low lying channel is less apparent in the present landscape; if, however, a road ran along this valley or to the side of it, this would doubtless engender a greater awareness of its presence. It seems unlikely that this broad channel is the result of comparatively recent glacial scouring or erosion by occupying streams, as, for the latter, its scale is too large. It is probable that the low natural ridge, now carrying the road across the valley, is formed of glacial debris, head deposits and colluvial material. Borehole 12 in Table 1.1 may have produced information on subsurface deposits in this location, instructive in this respect, but such data is not publicly available.

1.2.4 Soils

The British Geological Survey specifies a till cover over the Burnham Chalk in the vicinity of Hatcliffe Top and Corner Field as "till, Devensian-Diamicton" (British Geological Survey 2010; see Section 1.2.2). This clay till over the chalk was encountered during the excavations and covers much of the western half of Corner Field and its eastern fringe, but having been eroded off the steeper part of the middle of the field, where, accordingly, the chalk is exposed below the modern ploughsoil. Around 750m to the west, observation of a service trench on the Hatcliffe road in front of The Spinneys (cf. Figs 3.3 and 10.1), in September 2016, showed this clay to be around 30cm in thickness, lying between the topsoil and the chalk. Some boulder clay spreads along the eastern fringe of the Wolds give rise to pockets where soils are poorer than those of adjacent areas. The soils in Corner Field, however, engender good yields according to the farmer Mr James Walker (pers. comm.).

The present agricultural and other topsoils of the Wolds are on the whole characteristically loamy and readily worked. This general picture can vary though, as on the eastern Wolds edge where the presence of glacial stones, chalk scree and tabular flint fragments were a challenge to farming prior to modern machinery and where clays are exposed as the sub-soil (cf. Rae 1978, 121). The soils are mainly classified as Andover and Coombe series rendzinas over calcareous chalk bedrock (C horizon) which is within 40cm and without a diagnostic B horizon (Heaven 1978, 18-9; Rae 1978, 121; Jones 1988, 13). They can be flinty but include fine silt and can be characterized as silty clay loam or clay loam (Heaven 1978, 29) and are free draining. In addition to chalk the parent material is the drift till that, as noted above (1.2.2), blankets much of the Wolds. This till is of complex

mixed origins, as noted above, and includes loess. It is the source of much of the flint within present topsoils; the latter has typically not come from the underlying chalk itself, which contains sparse flint (cf. Heaven 1978, 28) but is residual. That said the ploughsoil at Hatcliffe Top contains much shattered grey flint from the tabular masses. Here, specifically, the till is Upper Marsh Till (following Straw 2008). Rae (1978, 121) states that generally soil pH is usually high at (7-8) in the present topsoil/ploughsoil, though liming has nonetheless traditionally been necessary over much of the Wolds (Willis 2013, 1.13). Heaven suggests there was at least one small chalk pit per field for this purpose and attention to aerial photographs, cartographic sources and observation of the landscape essentially verify this (Heaven 1978, 1). Phosphate is moderate with potash and magnesium generally low (Rae 1978, 121).

Turning to the Hatcliffe Top site, Roger Stephenson, speaking in September 2015, described the area of Corner Field with the Roman and Saxon site in ploughing parlance as “strong land”, that is, it had a high clay component. When ‘dry’ this soil breaks up into hard lumps; when ‘wet’ this soil was turned over by the plough in smooth flat slabs. He recalled that in the late 1950s and 1960s the ploughsoil was c. 5-6 inches (125-150mm) deep and then the plough was hitting clay or chalk.

1.2.5 Climate

Heaven noted that detailed discussion of climate was hampered by a lack of meteorological stations in the district (1978, 9). Variations in elevation over the Wolds means that rainfall can be uneven over the area. Wells’ 1971 map of isohyets of mean annual rainfall showed a range of 690-740mm, or 27-29 inches (Wells 1971). Data for rainfall at Binbrook (TF 196 958, between 1963-74) and Baumber (TF 222 740, 1958-74) at 114m and 61m O.D. respectively presented by Heaven shows maximum rainfall occurring in July and early winter with October usually a dry month (1978, 9 and Table 2). The Wolds soils are generally free draining and shallow so the dry spring and autumn weather of the recent era is not a particular advantage for cultivation (cf. Heaven 1978, 9-10).

Temperature information from Binbrook (station at 105m O.D. collected between 1963 and 1974) showed a large range of seasonal and diurnal variation (Heaven 1978, 11-2, fig. 5), while wind data for Binbrook over the same period shows predominant warm south-westerlies (Heaven 1978, fig. 6). Heaven noted that spring temperatures were effected (in recent times at

least) by frequent cold north-easterly winds which are the second maximum (that is the second most common source) in the spring (1978, 14, fig. 6). Hence the deeper valleys of the Wolds will be frost traps as cold air will be funnelled into their dendritic systems (Heaven 1978, 12). That said the elevation too of the Wolds tops is significant in keeping temperatures low in the early spring (Willis 2013, fig. 8.11). In sum crop growth on the Wolds in spring will be delayed by comparatively cold temperatures. On the other hand occasional drought conditions on the Wolds seem only rarely to adversely impact upon cereal crops (Heaven 1978, 29).

Heaven states that there are few soils in the district which are prone to wind erosion (1978, 14) although soil creep is a factor at even 2% gradients, meaning in this landscape that it has been significant.

Speaking in September 2015 Roger Stephenson observed that the Waithe Beck was now generally shallower than he recalled it being 50 years ago. In the 1960s he recalls that it could flood adjacent low fields. This was confirmed by Jonathan Fenwick (pers. comm.) who noted that the low western quadrant of his Field ‘1-2-3’, a normally dry tributary arm of the Waithe, used often to flood from overspill from the Waithe. Mr Stephenson further noted that the soils in the areas adjacent to the beck east of the A18 were ‘black land’ meaning they are organically rich.

1.3 The Lincolnshire Wolds: Population, Development and the Archaeological Evidence

According to the Annual Review of the Lincolnshire Wolds Countryside Service 2016-7 the population of the Wolds, as defined by the AONB, is around 10,700, distributed over an area of some 216 square miles (Lincolnshire Wolds Countryside Service 2017, 3). This gives an average density of 49.5 people per square mile compared to the average for England (taking a low estimate of 56 million persons) of 1113. These figures indicate how little modern settlement there is on the Wolds; this arises partly for historic reasons, alongside the nature of its rolling topography and intense agricultural use. This comparative lack of population has meant that there has been little development work on the Wolds resulting in fewer cases of archaeological monitoring of the type which have become otherwise routine and standard since 1991 across England. In 1988 Dilwyn Jones (of the RCHME) stated the following:

“Our knowledge of the archaeology of rural settlement

in northern Lincolnshire during later prehistoric and Roman times is deficient, principally due to limited fieldwork activity, both excavation and fieldwalking, in the past. During the last decade aerial reconnaissance has added significantly to the store of knowledge on the subject, but this body of evidence has not, as yet, undergone proper analysis or investigation on the ground" (Jones 1988, 19).

This situation has remained unchanged and is the main reason for the Central Wolds Research Project. Few interventions or commercial contract excavation work has taken place anywhere on the Wolds and relatively few in eastern Lincolnshire more generally, in contrast to other areas of eastern England such as parts of Cambridgeshire, the area around the city of Leicester and to a lesser extent the Trent Valley (Knight and Howard 2004). An exception is the Humber bank margin in the vicinity of Stallingborough, North Killingholme and Immingham (North-East Lincolnshire). In such areas through the same period since 1991, there have been numerous developments resulting in large bodies of archaeological information becoming available for study (cf. the East Midlands Regional Research Framework initiative (tparchaeology.co.uk/eastmidlandsresearch.strategy.htm)). This is far from the case with the Lincolnshire Wolds (Willis 2013, sections 1.3, 7.3, 8.3 and 9.1), although widespread metal detecting on the arable fields of the Wolds since the 1970s has yielded a huge body of metal finds, latterly being in part reported to the Portable Antiquities Scheme. The Wolds are also conducive to the generation of clear cropmarks particularly those areas with Andover series soils where the chalk geology lies immediately below topsoil (Jones 1988, 10; 13). Survey has consistently revealed, in particular, sites on higher and plateau areas and interfluvies of the Wolds rather than on valley slopes and bottoms. This may

be in part a function of there being more clay and alluvial cover deposits and other subsoil geologies in these locations that are less conducive to cropmark development (cf. Loughlin and Miller 1979, 162; Jones 1988, 10). The site presently under excavation by this Project between Binbrook and Brookenby, on a lower valley slope above the Waithe has a clay subsoil over chalk and has not generated cropmarks despite the presence of a series of ditches and other substantive features, probably for this reason (cf. Jones 1988, caption for fig. 18).

Little built over, with few areas of woodland, and with a high proportion of arable and pasture land (cf. Green *et al.* 2016, illus 5) on geology and soils that may generate cropmarks, the Wolds have, overall, yielded a firm record of past activity by these means. These features were mapped in the later decades of the 20th century by the Royal Commission on the Historic Monuments of England, particularly by Dilwyn Jones, with important earlier work by Paul Everson, resulting in a series of publications (Jones 1988; 1989; 1998a; 1998b). It is not surprising then that the Wolds show as an area with a comparatively high frequency of recorded Roman sites, or more strictly speaking attributed to that period on the basis of cropmark morphology, rather than via excavated evidence (Jones 1998a; Green *et al.* 2016, illus 2). Likewise they show an above average frequency for later prehistoric sites, though again almost totally on the ascription of cropmarks to such a cultural phase (Green *et al.* 2016, illus 3 and compared with illus 7; see the following Chapter). This pattern notwithstanding, there is marked variation in the recorded presence of cropmarks for later prehistoric and Roman era features across the Wolds with a strong emphasis in the documented record favouring the western side, and this is particularly apparent in the area of the Central Wolds.

Chapter 2

The Waithe Valley

Steven Willis

with some contributions by Jon Daw

2.1 The Waithe Valley

The Waithe valley, containing the Waithe Beck and its tributary streams, is a major feature of the Lincolnshire Wolds. The word *beck* comes from the Old Norse word *bekkr* meaning ‘a stream’ (Cameron 1998, 10). As with several of the large valleys of the Wolds it broadly drains the Wolds west and south-west to north-east, and whilst this drainage is dendritic in nature many of the tributary shorter valleys are likewise orientated. The course of the beck runs through two contrasting landforms, initially the undulating Wolds and then the markedly flatter Marshland to the east. This is a comparatively long system with the Waithe running for approximately 30km, 17km being through the Wolds and beyond the Wolds a further 13km to Tetney Lock. From its headwaters south of Kirmond le Mire, west of Stainton le Vale and above Thoresway, it progresses with confluences and several turns through the Wolds, before exiting the Wolds for the lower lying Middle Marsh at Waterdell at the eastern edge of Hatcliffe parish (TA 229 025), below the excavated site reported here. Although it has an extensive headwater system and collects several minor becks on route through the Wolds and beyond, it remains only a modest stream at the base of a broad valley. The large scale of the valley through the Wolds is a product of past scouring, when glacial meltwaters represented far stronger erosive flows. There is therefore marked contrast between the upper half of the course of the Waithe through the Wolds and that of its eastward part, beyond the site reported here, as it crosses the Marshland, to be joined at Tetney Lock by the Louth Canal. The character of the landscape has evolved through several major processes developing from its geology and glaciation, periglacial and post-glacial drainage and sedimentation, plant colonization, anthropomorphic interventions and tree clearance

in the post-glacial prehistoric period, farming and permanent settlement, Roman and medieval land organization, village and ecclesiastic establishments of the medieval period, episodes of depopulation, and Enclosures with associated land re-organization from the second half of the 18th century, which has set the chequer-board field pattern and communications routes familiar today.

This Chapter outlines the character of the archaeology and heritage of the Waithe valley, with particular attention to the Wolds, though noting too the nature and some detail of the remains through the course of the beck across the Marshland to the North Sea. First, this is by means of a chronologically structured sketch, before the perspective turns to that of the course of the valley and its tributaries from headwaters to confluence with the sea.

2.2 The Waithe Valley through Time

2.2.1 Later Prehistory

Aspects of the Neolithic era in the region were summarized in the previous volume (Willis 2013, section 1.6) where, too, the Neolithic evidence from the Mount Pleasant site was detailed. The latter included palisade trenching likely to represent an enclosure, with a placed foundation deposit, double palisading running several 100m along the natural ridge apex, a likely long barrow quarry ditch and a set of lithics including two axe-heads (Willis 2013). Here, this section focuses particularly on the Waithe valley, within its broader context, noting barrows and lithic finds.

The Lincolnshire Wolds show a strong representation of long barrows and elongated enclosures likely to be of this period and associated with ceremony, ritual

and burial (Phillips 1932; 1934; Jones 1998b). In the central and southern Wolds several examples of long barrows survive as extant mounds, with major excavations having occurred at barrows 1 and 2 at Giants Hill, Skendleby (Phillips 1936; Evans and Simpson 1991). In the Waithe valley several examples are known including a pair at Hoe Hill, to the north-east of Binbrook, and at Ash Hill, Swinhope, on the opposite side of the valley (Phillips 1989a; Jones 1998b, gazetteer nos 52, 53, 56; see below Section 2.3.1). The latter were subject to investigative fieldwork by Sheffield University in the early-mid 1980s. One of the main findings of that work emerged from the pollen and molluscan evidence, showing the landscape to have been largely grassland, with few trees, at the time of the institution of these monuments in this part of the valley. This environment was maintained, with some woodland regrowth, through to the Roman period (Phillips 1989a, various contributions). The picture is consistent with a wider pattern for the Wolds of predominant grassland, presumed to be the result of clearance, before and at the time of, the institution of its long barrows (Phillips 1989a, 181-5).

A number of long barrows are recorded as soilmarks or cropmarks. The latter include that by Trusoles Plantation, Stainton le Vale (TF 164 941), that shows clearly in aerial photographs on an interfluvial ridge overlooking the middle headwater tributaries of the Waithe (Jones 1988, fig. 9; Jones 1998b, gazetteer no. 45, fig. 6)) and another (also flattened) c. 800m south-west of Kirmond Top lying on the ridge between the southern headwaters of the Waithe and the western Wolds edge (Jones 1998b, gazetteer no. 38, fig. 6; SAM 1017879). Jones has pointed out the concentration of these monuments within and besides some of the major valleys of the Wolds, including the Waithe valley (Jones 1998b, fig. 4). He suggests "The density and numbers in which monuments are found in these valleys denote them as prime areas of settlement in the Early Neolithic and may be an indication of the predominance of these valley communities" (Jones 1998b, 91). North from the Great Eau, at the south of the Wolds, there are however no such monuments known along the eastern fringe of the Wolds, nor by the mouths of these valleys as they open to the Marshland. At Hatcliffe Top there is, however, some evidence from surface finds of lithics that there was Neolithic activity in and around this entrance way to the valley (cf. Chapters 5 and 10).

Neolithic axe-heads and other flint tools are well attested across the Wolds (e.g. Manby 1994); the record for the area around Thoresway is particularly strong (cf. Section 2.3.2). The incidence of lithic tools in the area was systematically sampled in the early and mid-1980s

by the Sheffield University team under the direction of Pat Phillips (Phillips 1989a; 1989b). This took the form of extensive fieldwalking collection within a transect across the Wolds to the south of the area of Hatcliffe Top. The findings were fully published. Mention should also be made of a pit group from the Ash Hill barrow site which comprised Late Neolithic and Beaker pottery (Phillips and Thomas 1989).

South and east of Hatcliffe village two tributary valleys open to the Waithe. That to the south is the steeply sided Round Hill meltwater channel (cf. Straw 2008, 16, pl. 8) and that to the east, the Hatcliffe Plantation channel (Fig. 1.4). The heads of these short valleys meet at West Ravendale (c. TA 226 000) by the site of the former Premonstratensian Priory and modern Priory Farm, with a further valley running southwards from this point and also a cut through to East Ravendale. Clusters and spreads of flint tools were identified from locations along the north facing side of the corridor running from the Round Hill channel to East Ravendale in the 1960s, with some 242 flint items gathered by Mike Felcey (TF 233 996, TF 220 000, TF 224 990). Another group of 120 items (seemingly flints) was recovered by Mike Felcey on the east side of Round Hill (TA 222 005) overlooking the Hatcliffe Plantation valley (Whitwell 1967, 31; Loughlin and Miller 1979, 166; these finds were seemingly not catalogued and their identification and status as artefacts is uncertain). These valleys may have had streams and pools in the post-glacial period. There is no further information as to the dates of these finds but they perhaps point to a pattern of sustained use of this valley. Some 80 flint artefacts are recorded from Ashby Hill (TA 242 004) on the Wolds edge overlooking the A18 south from Hatcliffe Top (Whitwell 1967, 31). A location also known for ploughsoil surface finds of Roman pottery, on the north bank of the Waithe in Beelsby Parish, has recently yielded a Great Langdale greenstone polished implement dating to this period (see Chapter 10).

Leaving the Wolds, the Marshland has yielded several examples of Neolithic axe-heads. A polished stone axe-head of Lias stone was recovered from ploughsoil at Norman Corner, north of Briggsley, a distance of c. 800m north of the Waithe in 1951 (Loughlin and Miller 1979, 165). Further east near to Tetney a polished stone axe was found near Old Fleet Drain in 1957 (Lincs HER 41218). In this general area the Humber Wetlands Survey team recovered several worked flints of Neolithic-Bronze Age date during fieldwalking (Ellis *et al.* 2001, 124-8). A polished axe-head from modern ploughsoil, found north-east of North Thoresby by Mr Cliff Spencer of Brookenby, is a further indicator of the use of this landscape during

this period when it is likely to have been a complex environment of fresh and marine channels (see Chapter 2.3.5). Further to the north several axe-heads have been recovered from the Grimsby–Cleethorpes area (Wilson 1970; cf. Wise 1990; Chapter 9). Whilst no long barrows are known from anywhere on the Marshland (cf. Jones 1998b, fig. 4; Chapman 2001), given that at Haddenham, in Cambridgeshire, a long barrow was found in peat (Hodder and Shand 1988) and subsequently excavated, the prospect of monuments of this type being discovered off the Wolds in the Marshland should not be discounted.

Aspects of the Bronze Age in the region were summarized in the previous volume (Willis 2013, section 1.7) wherein the evidence of Bronze Age activity at the Mount Pleasant Nettleton/Rothwell site was detailed. The latter included the stratified Early Bronze Age flat axe and set of three faint circular anomalies registering on the geophysical survey, suggestive of an alignment of flattened round barrows, in East Field (Needham 2013; Willis 2013, 30). A corpus of Bronze Age axes and other metalwork of that period from Lincolnshire was published by Davey in the early 1970s but needs revision as it predates systematic metal detecting and other finds (Davey 1973). This section focuses on the evidence from in and around the Waithe valley.

Round barrows (*tumuli*) are a feature of the Wolds, but have received comparatively little attention. Whilst a small proportion survive as extant mounds the majority of designated examples are known from crop and soil marks, having been flattened. Ascription of ring features as levelled round barrows is an interpretation and cannot usually be verified by site visits as artefacts may often not be present in topsoils and no mound may be visible whatsoever. Soilmarks c. 2km north of Hatcliffe Top, north of the Beelsby-A18 road (TA 223 029) may relate to barrows of this date, but might be of another period (Loughlin and Miller 1979, 165). At least one “ploughed down” round barrow and soilmarks of perhaps four more are listed by Loughlin and Miller (TA 1995 0064 extending to TA 2000 007) overlooking the confluence point of the Thoresway Beck and the Waithe west of Hatcliffe village (1979, 164; after Phillips 1934, 159; Wilson 1970, 6; the Thoresway Beck now does not run this far due to the damming at Croxby Pond (see below)). Miller classifies this group as one of the top three prehistoric sites in the whole Cleethorpes district (comprising 21 parishes) in terms of archaeological potential (Loughlin and Miller 1979, 162). Principally recorded on the higher ground, as elsewhere, they often occur in groups and alignments in prominent upland positions. Mr David Everatt noted several

barrows as soilmarks and slight mounds on the high ground in the area of Rectory Farm, south-east of Thoresway, in the 1960s and conducted exploratory excavation. Two had been previously opened and the primary burials were absent; finds included a few sherds of beaker pottery, a flint scarper and a bronze basket ear-ring (Whitwell and Wilson 1968, 21; Willis 2013, 9). At North Top, overlooking the Waithe valley, to the north-west of Kirmond le Mire (TF 179 933), a group of five ring ditches are known from aerial reconnaissance (Jones 1988, fig. 10). On the Marshland three Bronze Age round barrows occur in the Grimsby–Cleethorpes area to the north of the course of the Waithe (Wise 1990). A flat axe dating to the Early Bronze Age, of Arretton Down type, was recovered in the Tetney area by a metal detector user (NLM-27F437).

In 2017 an assessment survey of the long barrows of Lincolnshire funded by Historic England was initiated (due to complete 2018) with the stated aim of better understanding these monuments and informing their management; a similar project in the case of the round barrows could also be envisaged for the same purposes. Their significance is increased by the high number on the Wolds and given there is little known of settlements and settlement location at this time with few excavations having taken place on sites of this period in eastern Lincolnshire. A partial exception is the following site. North of Hatcliffe Top, excavations in advance of a gas pipeline at Riby crossroads in 1991 yielded worked flints, fragments from Early Bronze Age beakers and a quantity of Bronze or Early Iron Age pottery, but no prehistoric features (Steedman 1993b; 1994).

Data on the Iron Age in the region were summarized in the previous volume (Willis 2013, section 1.8) where evidence from the Mount Pleasant site was also detailed. The latter publication documented two Iron Age activity pits, potentially relating to feasting, a major ditch associated with a trackway, and other Late Iron Age features, together with pottery and coin finds (Willis 2013). Jones noted in 1988 the fact that the amount of specific Iron Age material from his Lincolnshire transit was ‘slight’ (1988, 20), a pattern that has been broadly reflected in the results of the current Project with Iron Age occupation recorded so far only at two sites, namely Otby Top and the Mount Pleasant Nettleton/Rothwell site (Willis 2013). The air photographic record is not at all strong for this period but in contrast to the preceding millennia the Iron Age is not a period generally characterized by ceremonial and mortuary monuments in the way that the Neolithic and Bronze Age are, at least not in Lincolnshire; similarly, as is well known,

Iron Age pottery is not normally robust and may be vulnerable to breakdown in ploughsoil environments. The frequency with which Iron Age coins have been recovered by metal detecting provides, however, an intriguing contrast. One now well-known site in the Waithe valley through the Wolds that may belong to this period is the enclosure site north-east of Binbrook (TF 211 946) which contains a ring gully suggestive of the eaves drip gully for a roundhouse (Jones 1988, fig. 11; Willis 2013, 11). This site is known locally to metal detectorists as an Iron Age hillfort given its plateau top location overlooking the Waithe and its tributary valley by Binbrook, but in actuality the site appears to have been a farmstead and could date from the Bronze Age to the Roman era; there are no upstanding earthworks. Jones records that examination of the site after ploughing yielded no surface finds (Jones 1988, 20). Paul Robbins, Chair of the Grimsby Metal Detecting Club, has stated that to his knowledge no Iron Age coins or other finds had been forthcoming from the site, only Roman coins (pers. comm). Little is known of the Iron Age period on the Marshland although the enclosure site with roundhouses and non-ferrous working evidence excavated at Weelsby Avenue, Grimsby, some decades ago, is well-profiled in the literature (Sills 2001) and alongside coin finds of this period from the Grimsby area (Wise 1990) signals the use of this landscape.

2.2.2 The Roman Era

2.2.2.1 Roman period sites on the eastern edge of the Lincolnshire Wolds

A much more visible record exists across the Wolds for the Roman era compared to the evidence for the preceding millennium. This record is manifest in surface spreads of pottery, sometimes with building materials, coin and metal small find clusters identified by metal detectorists, and aerial photography. Aerial survey has been particularly successful in documenting many sites on the Wolds believed to be of Roman date, often, upon surface examination providing artefactual confirmation. These sites are especially visible on the lighter soils over chalk and are mainly known from the western side of the Wolds (Willis 2013). In 1988 Jones pointed out that cropmarks and find-spots of the Roman period were, however, rare on the eastern half of the Wolds (1988, 21), a phenomenon that remains true. This in part was a motivation to undertake the fieldwork at Hatcliffe Top as one of the few sites on the eastern side of the Wolds seeming to be a focus of activity in the Roman period. The site was classified

by Miller as one of the top two Roman period sites meriting investigation, in terms of archaeological potential, amongst the 21 parishes of the Cleethorpes district (Loughlin and Miller 1979, 162). Jones attributed the absence of knowledge to the lack of research and also the existence of the RAF airfield at Binbrook which was still operational until April 1988, meaning less archaeological reconnaissance was possible (Jones 1988, 21). To this it might be added that cover deposits of glacial till are more prominent on the eastern dip slope and are unlikely to be conducive to cropmark generation (Loughlin and Miller 1979, 162). However, metal detecting has (seemingly) not yielded the frequency of finds on this eastern side to the degree known on the western side so this infrequency of sites may be a real pattern rather than a function of recording circumstances. That said there may be material that has not been recognized, or recognized but not reported.

Several sites of Roman date are known along the eastern fringe of the Wolds between Louth and The Humber. Here (below) sites north of the Hatcliffe Top site are noted prior to those on the south side (the listing here progresses from north to south; sites known from the Marshland in the Killingholme-Stallingborough area are considered elsewhere (Discussion Chapter 11)).

At the northern end of the Wolds two regionally significant sites, where occupation extended to the end of the Roman period, are known at Glebe Farm and Deepdale (Fig. 1.1). Excavations and survey at Glebe Farm, Barton-upon-Humber, in 1992, some 28km north-west of Hatcliffe Top, revealed an extensive rural settlement dating from the early second century to the very end of the Roman era (Steedman 1993a). Unfortunately the site has never been fully published although a comprehensive draft pottery report highlighting the site and ceramic sequence was produced, and has been made available for study for the present volume by the author (Didsbury nd). Work at Deepdale, Barrow-upon-Humber, c. 25.5km north-west of Hatcliffe Top, yielded evidence for a late Roman aisled building but likewise has never been fully published (Atkins *et al.* 1981). Evidence from both of these sites is considered further in Chapter 11. The excavations at Riby crossroads in 1991, c. 8km north-west of Hatcliffe Top, produced Roman pottery of second and early third century date but no contemporary features, indicating activity nearby (Steedman 1993b; 1994).

Near Walk Farm, Irby (TA 209 039), some 2.5km north-north-west of Hatcliffe Top, tiles and building foundations together with pottery of second and third century date are known from surface finds of the

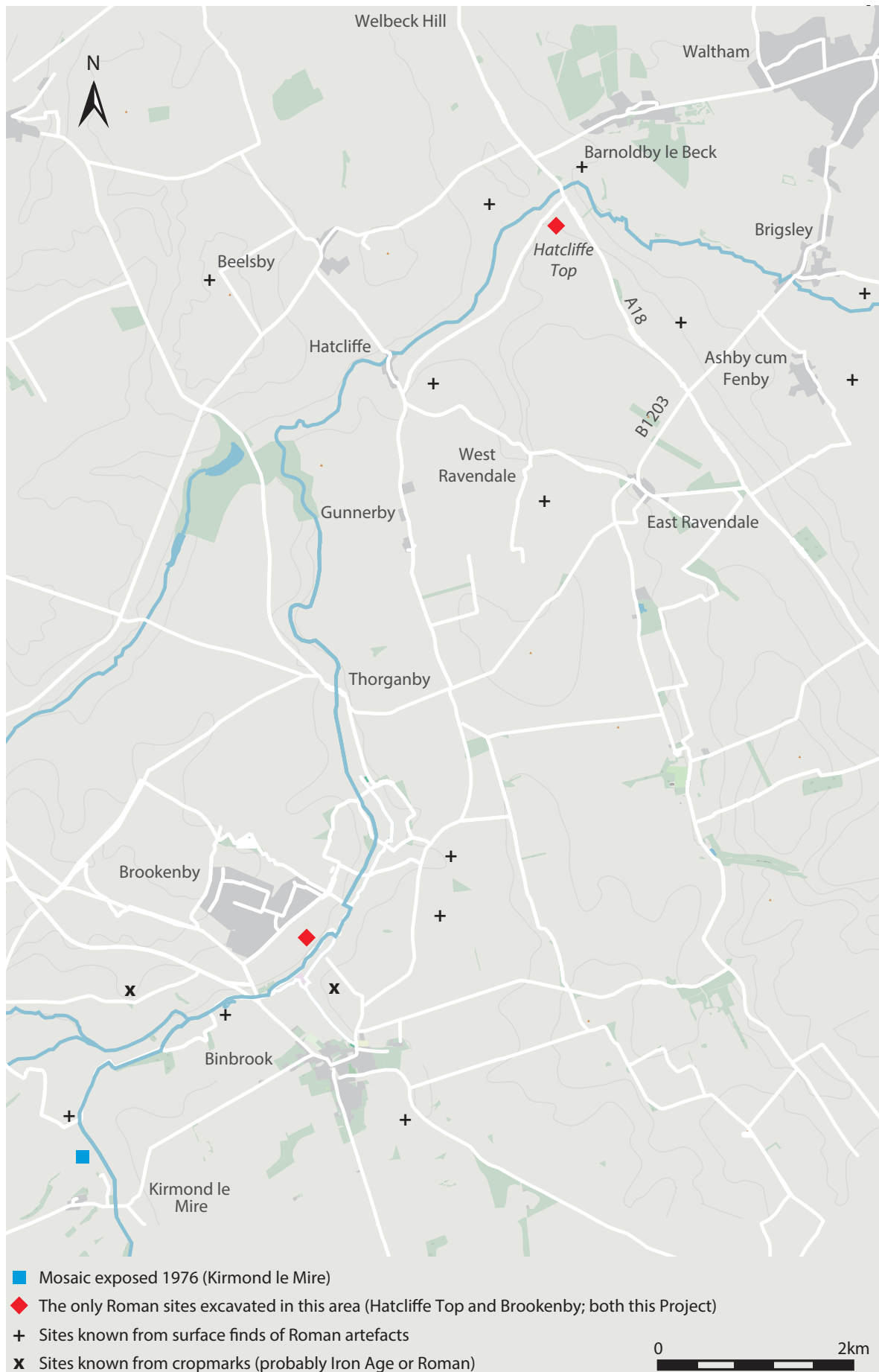


Fig. 2.1 Roman era sites and find-spots in the vicinity of Hatcliffe Top.

1950s (Loughlin and Miller 1979, 168; see Fig. 1.2). Cropmarks show a rectilinear enclosure while a trial trench in the early 1960s by Gordon Taylor recorded a “dark band of occupation material” associated with greyware sherds, iron artefacts and animal bone (Loughlin and Miller 1979, 168; again there seems to have been no detailed report published). A spring and stream (a tributary of Laceby Beck) lie c. 200m to the north-west of the site.

Some 2.2km west of Hatcliffe Top at Beelsby Top, above the village of Beelsby, reported at c. TA 197 0159 and 198 016, chance finds of a fragment of a beehive quern and a Romano-British greyware flanged bowl (Loughlin and Miller 1979, 164) may indicate a Roman site with Iron Age origins, though these records are typical of the need for better information on what are potentially significant chance/surface indicators from the Wolds generally. This is likewise true of the report of Romano-British pottery from close by Priory Farm, West Ravendale (TF 227 997); there is a spring at this location and it is also the site of a former priory (Wilson 1971, 9).

Near to the Hatcliffe Top site, on the high ground above the north side of the Waithe valley, from an area that is now cultivated as one very large field, by the junction of the A18 and the Beelsby road a cropmark and surface finds had been speculated to be the indications of a Roman villa (HER 0095/1/0; TA 225 027; Fig. 2.1). The field is now known as “1-2-3” following its amalgamation and the recorded find-spot lies c. 0.5km north-west of Hatcliffe Top. The finds were gathered by a former member of the NELALHS around 2003 and are said to include some Roman greyware pottery and building debris together with later material. A cropmark from c. 2008 shows rectilinear features covering a sizable area towards the south of the field (at c. TA 224 023). However, the latter may be related to the installation of field drains and given that the features are perpendicular to the nearby western boundary of the field, while other linear features traceable as cropmarks share their alignment, there is some likelihood these are related to recent land improvement activity. Considered “conjectural evidence” on the North East Lincolnshire Council Historic Environment Record these finds from the location specified above are not well-characterized or firmly dated, nor are they available for study. The PAS database records only two items from the area, both medieval, comprising a vessel foot and a buckle both of copper alloy (search date 14.8.2017). A walkover survey of this specific location within “1-2-3” in good conditions for surface observation in late September yielded no surface finds. It is thought by

the land owner and farmer that the finds suggested to be a villa relate to the hardcore of a former farm track visible on the OS Explorer Series Map 284 as recently as 2000 and now ‘ploughed-in’ (pers. comm. Jonathan Fenwick) while the former County Archaeological Officer had always been sceptical of the ‘villa’ attribution (pers. comm. Hugh Winfield). There are archaeological finds from this field but not from the ‘villa’ location noted on the HER (see Chapter 9).

Just 1.5km to the south-east of Hatcliffe Top, on the skirt edge of the Wolds, surface finds of Roman material were documented in 1965 by Gordon Taylor. These came from a field south of Moorhouse Farm, Ashby cum Fenby (TA 242 013) and consisted of a small group of Roman sherds and shell tempered ware (Loughlin and Miller 1979, 164; see Fig. 1.2).

At a similar elevation, on the lower skirt edge of the Wolds, a field near Grainsby Grange, c. 5.5km south-east of Hatcliffe Top, has yielded Roman period finds. The site lies slightly east of the A18 in the parish of North Thoresby (TF 266 982), yielding third century Roman pottery and features speculated to represent a Roman vineyard (Webster *et al.* 1967). Ground and air observation of a ploughed field had shown darker lines of soil forming something of a regular grid pattern during the later 1950s covering an area of c. 5ha. (12 acres). Given the association with Roman pottery and animal bones at the surface, trenches were opened over the soil marks at six points; cut features were encountered up to c. 2m wide and c. 1.75m in depth (Webster *et al.* 1967, 55). The features were interpreted as cultivation trenches dating to the late third century and the preferred thinking in the published article was that this was a failed experiment in viticulture (Webster *et al.* 1967, 56-8). There are a series of questions arising with this report which mean this interpretation of the site is doubtful. Firstly the trenches were evidently opened at unrepresentative points in the soils mark grid, so may have examined older settlement features rather than cultivation lines. Very little detail on the trenches themselves and non-pottery finds is given while the location for such an experiment in the cultivation of vines seems strange given that nearby Wolds slopes with their chalk subsoil would have been a more conducive environment. The possibility that a proportion of the patterned soil marks arise from medieval cultivation (rigg and furrow) and that this use overlies a Roman era settlement needs consideration for this could lead to residual Roman sherds being churned into later cultivation channels (thought by Webster *et al.* 1967 to be vine beds), as was indeed the case at Hatcliffe Top. It may also be



Fig. 2.2 The location of the Roman villa at Kirmond le Mire (centre of photo), lying within a broad bowl surrounded by higher land.

noted that there are wide indications this area was subject to extensive rigg and furrow cultivation. There was evidently Roman activity represented in the field and perhaps it is signal that the report is based on approaches that were reasonable half a century ago, whilst we have different means and approaches 55 years on. The cultivation of vines in Roman Britain has been established with certainty at Wollaston, Northamptonshire, and the evidence for Britain generally has received recent attention (Lodwick 2017).

2.2.2.2 Roman period sites in the Waithe Valley through the Wolds

More sites of Roman date are known further west, along and around the course of the Waithe from Swinhope westwards. Fifteen settlement sites on the Wolds in the area of the valley are suggested in the Monument Register as dating to this period of which one is classified as a villa. The majority are solely copmarks attributed to the period because of their rectangular morphology as viewed from the air. Additionally six enclosures are classed as Roman, although their description suggests that there is no morphological separation applied from those sites classed as settlements (pers. comm. Jon Daw).

The Roman Villa at Kirmond le Mire

The best known Roman site in the valley area in the literature is the villa at Kirmond le Mire, its notoriety due to the discovery of part of a mosaic, though in fact there are almost no other details known about this site. Since the discovery of the villa over 40 years ago a growing number of sites of Roman date have been recognized in the adjacent landscape, mainly as a result of air reconnaissance, though some as a result of metal detecting. The density of these sites mirrors the emerging pattern for parts of the western fringe of the Wolds, and contrasts with the thinner known picture for the eastern side. The evidence suggests the Waithe valley was intensively settled and farmed at this time, though specifics regarding what can be said and deduced are limited through lack of archaeological work following up the discoveries.

The Roman villa at Kirmond le Mire (TF 1850 9330) is known largely on the basis of a part of a mosaic pavement discovered in the mid-1970s, alongside cropmark evidence (White 1976; Lincs HER 54193; pers. comm. Mark Bennet). The villa lies on fairly flat land in a natural bowl in Kirmond le Mire parish at c. 70-75m OD, positioned beside the convergence of the Waithe Beck from the south with a tributary stream. Roman finds had been known from the 19th century but the villa was only discovered



Fig. 2.3 Part of the Roman stone building excavated at Brookenby in 2017 (as part of the Central Lincolnshire Wolds Research Project).

in the mid-1970s by Mr D. Davidson of Louth, an amateur archaeologist. It had not shown on aerial photographs to that time. The field in which the villa was located had, however, been recently disturbed by dragging, resulting in the exposure of pottery and tile at the field surface, together with detached tesserae. "Ridges and hollows" in the field surface had apparently suggested buried walls and rooms (White 1976, 62). Clearance of topsoil was undertaken by Mr Davidson and around eight square metres of a well-preserved mosaic were eventually revealed at c. 20cm below the field surface. Andrew White and other staff of the City and County Museum, Lincoln, recorded the find, which was thought at the time to elaborate a corridor or small room (White 1976, pl. II). White stated that this was substantially complete (1976, 62) though Neal in his report on the mosaic notes the rather irregular nature of the excavation trench and the patchy recording and suggests it was part of an enclosed porticus. (Neal and Cosh 2002, 160). It was reported by White that the tesserae were formed from white chalk, cubed red tile and blue/black unoxidized tile. The mosaic is particularly noteworthy for the depiction of birds, closely resembling blackbirds. Neal notes that no firm attribution can be made to known mosaic groups and equally the date is not certain but is possibly earlier fourth century (Neal and Cosh 2002, 161).

Some gridded fieldwalking was subsequently conducted by Paul Everson and Andrew White (White 1976, 62). The records of this fieldwalking exercise are now, however, unlocated, with no copy lodged with the Lincolnshire HER, while an attempt by Dilwyn Jones to find them in the Royal Commission archives in the 1980s was unsuccessful. Unfortunately only provisional notes on the site were published and so details are lacking. These notes appeared in *Lincolnshire History and Archaeology* in the mid-1970s (White 1976). The Lincolnshire HER has a rough sketch plan made by Mr Davidson; this plan though lacks detail and is unclear, perhaps as it may once have had associated notes that are now lost (pers. comm. Mark Bennet).

White implies that more than one building was suspected. He stated that the site covers c. 5 hectares (12 acres) and that the fieldwalking indicated "something of the layout and use of the buildings, including ironworking" (1976, 62). Surface finds were reported to cover an area of 5 hectares. Fragments of painted wall plaster were recovered and "other tesserae" with the implication that there are further mosaics at the site. Finds of pottery and coins are said to denote a fourth century AD date (White 1976, 62), though pottery of earlier date was also present, including

samian ware. It may be that the fourth century pottery is the more datable element of an assemblage covering a longer time range.

The site was back-filled, and under a management agreement the field has since been laid to permanent grass. The site is protected as a Scheduled Ancient Monument. No geophysical survey has been undertaken at the site; aerial views show some, albeit little, detail regarding ancient features (cf. Jones 1998a, 71). Being under permanent grass a geophysical survey of the site could be readily undertaken, if circumstances were otherwise amenable. Jones notes that the villa lies within double ditches which are a feature of a number of cropmark complexes on the Lincolnshire Wolds believed to be of Roman date and suggestive of villas (Jones 1998a, 71-3). The site at Brookenby, excavated as part of the Central Wolds Project, lying some 3km downstream from the Kirmond le Mire villa, is a case in point; it too can be classified as a villa (Fig. 2.2). A bridleway passes across the Kirmond le Mire site but observation from its course shows nothing of the villa site bar its setting. Just 500m north of the site of the villa (at TF 184-5 935), in a similar valley floor location, a further concentration of finds of Roman date is known (Whitwell 1966, 37) with associated air photographic evidence (Jones 1988, 21, fig. 8). The latter comprises enclosures and, as interpreted by Jones, a roundhouse (1988, 21), leading him to speculate as to whether this was an associated or contemporaneous settlement.

White had commented that the location of the villa in a low-lying position was atypical of the other (at the time) known villas in the area, specifically the "Wold top villas" of Worlaby and Walesby, whilst the presumed villa at Claxby lies below the Wolds at the foot of the escarpment (1976, 62). The well-defined rectilinear enclosure complex on the higher land at North Top, 1km to the north-west of the villa, recorded by Jones (TF 174 932; Jones 1988, 25; 1998a, 77, fig. 11; Willis 2013, fig. 9.5) may be an associated farm located in a less advantageous location (at 115-120m OD), though a common one for the Roman period on the west side of the Wolds (cf. Willis 2013, chapter 8). Field inspection in the 1980s reported by Jones revealed certain fragments of tegulae from this site (1988, 25); it may equally have been of villa status and independent of the villa at Kirmond le Mire. The site now lies within an arable field that is part of The Richard Sutton Estates Ltd; two requests made by the current author to examine the field surface at this site (in 2005 and 2007) were declined as the estate allows no archaeological study on estate land (nor metal detecting), and has participated in the Countryside Stewardship Scheme.

Roman sites near Orford

Another enclosure complex likely to represent Roman occupation lies on the north bank of the Waithe, north-west of Priory Farm, Orford, between the villa at Kirmond le Mire and the site at Brookenby at around 95-100m OD (TF 191 946; Lincs HER 54191). This site is known from air reconnaissance. It comprises a highly regular enclosure complex of rectilinear form and is characterized by Jones as of 'ladder' form of Romano-British type, with irregular features "below" (Jones 1988, 25). Given that this complex has an overall uniformity Jones argues for it having been planned (Jones 1988, 25, figs 8 and 18; 1998a, 77, fig. 11a; Willis 2013, fig. 9.5). The layout is not dissimilar in form to that of the enclosures at North Top (cf. above) and those mapped by geophysical survey at Hatcliffe Top. A field inspection yielded tile fragments – not all necessarily Roman – together with part of a Roman greyware (pottery) colander (Jones 1988, 25). A sherd of Roman greyware was recovered from the south-west area of this site, lying at the surface by the field edge in 2004 prior to the field in which the majority of the site lies becoming permanent pasture. Jones suggested the possibility of a relationship between this site, the one at North Top and the villa at Kirmond le Mire, probably agriculturally based (1998a, 177). Allen has since speculated as to whether these cropmarks represent a Roman farm complex or a deserted medieval settlement (Allen 2003, 4-5 and table 1) that he states is thought to be associated with Orford Nunnery (Everson *et al.* 1991, 181; Orford Priory, Lincs HER 50709). If that designation is correct, however, this would be an additional DMV to that at Orford just 600m to the south-east (Lincs HER 50708; TF 1977 9464). Allen describes 54191 as comprising "a series of regular crofts (revealed as cropmarks) aligned along a central street. Several circular enclosures with causeways and a row of small square enclosures may be of earlier date" (Allen 2003, 4). No Medieval/Post-Medieval material seems to have come from this locality, so on current evidence it appears more probable that Jones' interpretation is correct. Further information on the date and character of this site may not be readily forthcoming given the field in which most of this cropmark lies has been under grass and clover for the past decade or so as part of a Countryside Stewardship scheme, which has assisted its preservation, with no ploughing since the early noughties.

A short distance downstream, on the opposite side of the valley, c. 270m south-west of Orford Bridge, Roman finds have been recovered from the surface of a ploughed field at c. TF 202 944. These finds include

several Roman coins, together with a considerable number of Roman pottery sherds and box-flue tiles, associated with surface stone. The find-spot is clustered around the 65m contour, in an area c. 150 x 150m (pers. comm. Steven Allenby and Des Pearce). As far as can be judged from these surface finds the likelihood is that this is another settlement site of the Roman period and is a further indication of the density of Roman sites in this central area of the Wolds. Proximity to the medieval and early medieval occupation and the presence of post-medieval finds in the general area suggestive of settlement/activity is a complication in this case.

In addition to the Kirmond le Mire mosaic site Scott (1993) included three surface scatter sites in Thoresway (Section 2.3.2) and another site at Kirmond le Mire in her gazetteer of villas in Britain on the basis these were spreads of building debris; this can be thought a reasonable criterion but of course leaves much unknown (moreover Scott's gazetteer needs updating). Further to this, the site somewhat downstream between Binbrook and Brookenby currently under excavation has at least one substantial aisled building with associated painted wall plaster plus, on the basis of geophysical survey, a likely winged main house, so it too must count as a villa, dating, in this case to the mid-Roman period (Figs 1.1 and 2.3). The site is bounded by double ditches (though these need not be contemporary with each other). The date for villas in Lincolnshire, according to Bennet (2006, 4), is from the later second century to the fourth century, so Kirmond le Mire, with pottery and coins from the fourth century and with at least some earlier material, as well as Brookenby, fall comfortably within that bracket.

Previous characterization of Roman settlement and land use

Stock rearing has been inferred by Jones from double ditched enclosures (Jones 1998a, fig. 4) or enclosures with incurved entrances; Jones points to the cropmark site at Ruckland as a potential example, with its inturned entrance (Jones 1998a, 77, fig. 9). Yet overall the existing narratives on settlement trends and land use have been general and speculative through lack of firm evidence (Todd 1973; Whitwell 1982; Bennet 2006; 2009). All else being equal one would anticipate a mixed farming economy over this landscape given the suitability of the higher land, with thinner well drained soils, for the production of cereal crops. Within the Waithe valley some arable farming might be suggested by the fairly wide incidence of beehive type querns, a form examples of which could date

either to the Iron Age or Roman period; however, quernstones were used probably daily at consumer settlements at this time to generate flour at the point of need. They might have been used at producer sites, but only if the flour was to be sold on and used relatively quickly, and in such instances milling would be more efficient. Given the Roman period in Britain is nearly four centuries, changes of agricultural practice during that span might well be expected.

Evidence of the transition from the Roman period is generally slight in Lincolnshire and, prior to the excavations detailed in this volume, non-existent in the Waithe valley. The possibility of Germanic mercenaries in Lincolnshire has been suggested by Leahy (1984). The continued occupation of Lincoln into the fifth century is well-attested (e.g. Bennet 2015, 5), while 'stray' late Roman military buckles were discussed by Whitwell nearly half a century ago (Whitwell 1970).

2.2.3 The Anglo-Saxon Period

Steven Willis and Jon Daw

Evidence for this period in the Caistor, Nettleton and Market Rasen area was summarized in the previous report in this series (Willis 2013, 1.10). In North-East Lincolnshire the Anglo-Saxon period is, at present, best evidenced by cemetery sites. Several are known on the fringe of the Wolds on its eastern side north and south of Hatcliffe Top, mainly comprising inhumations (Leahy 1993, fig. 4.2, appendix A). This is mirrored by the presence of a similar string of cemeteries along the western edge from Caistor to the Humber (e.g. Sawyer 1998, fig 3.4); these are again mainly inhumation cemeteries, with the notable exception of the early Anglo-Saxon cemetery at Elsham of the fifth and sixth centuries where 569 cremations were excavated and only 8 inhumations. The latter site, along with the cremations from Cleatham, further to the west on the Lincolnshire Limestone, have been subject to a recent study by Squires (Squires 2013; cf. Leahy 2007a).

An Anglo-Saxon burial site was excavated by Gordon Taylor between 1962 and 1979 at Welbeck Hill, Irby (TA 217 042), on the Wolds edge c. 2.2km north-west of Hatcliffe Top (Whitwell 1967, 41; Whitwell and Wilson 1968, 29; Leahy 1993, 40; 2007b, 57-96). The burials comprised 72 inhumation graves and 5 cremations dating perhaps from the mid-fifth to late sixth century (Loughlin and Miller 1979, 168; Leahy 1993, 40). A wide range of artefacts was recovered (Loughlin and Miller 1979, 168; photos

kindly provided to David Robinson by Gordon Taylor). Amongst these were the following: silver finger rings, an annular brooch, ceramic and glass beads and a gilded bronze square headed brooch (Whitwell 1967, fig. III 2a-h), as well as an elaborate Group V cruciform brooch from one of the graves (Whitwell and Wilson 1968, fig. II no. 7). Four sunken features yielding much undecorated domestic pottery, found nearby, may relate to a contemporary settlement (Whitwell 1967, 42). Unfortunately this site remains unpublished and the finds are due to be auctioned in June 2019. Another Anglo-Saxon inhumation cemetery again north of Hatcliffe Top was discovered at Laceby (c. TA 203 066) on the Middle Marsh in the 1930s, (Loughlin and Miller 1979, 170), while two further Anglo-Saxon cemeteries (on the Wolds), but less well-documented, lay some 5km and 14km respectively south of Hatcliffe Top at Wold Newton, known from 19th century finds (Loughlin and Miller 1979, 171; Leahy 1993), and at South Elkington, with 290 urns, excavated in the mid-1940s (Leahy 2007b, 37). The inhumations at the Castledyke site, Barton-upon-Humber (excavated between 1982 and 1990) comprise around 200 graves of sixth and seventh century date and the study of the skeletons has been highly informative (Boylston *et al.* 1998).

The record of settlement evidence for the early Anglo-Saxon period in Lincolnshire is meagre, as elsewhere in eastern England. The inventory of finds of this period from the region is nonetheless growing through the Portable Antiquities Scheme. Often sites are suggested only through scatters of pottery discovered by fieldwalking with little stratified occurrence (Leahy 2007b, 127). Ceramic production and usage through the Anglo-Saxon period was much more limited than in the proceeding era, especially in the immediate post-Roman era, before vessels produced in the Charnwood Forrest area of Leicestershire and others in their style appear from c. AD 600 (Higham and Ryan 2013, 144). This absence of a 'ceramic habit' is a major drawback in identifying communities at this time. There is more evidence from the seventh century onwards (Hamerow 2002, 93; Tipper 2004, 18). The work by the Humberside Archaeological Unit at Riby Cross Roads in 1991 revealed remains of a settlement occupied from the sixth or seventh century through to the mid-ninth century. The evidence, forthcoming from excavation and cropmarks, indicated a nucleated complex with enclosures, trackways, pits, likely field ditches and some structural features; an extensive assemblage of artefacts was recovered (Steedman 1993b; 1994). Some Early Saxon pottery was present but was recovered alongside later types, with the site passing out of use

for reasons not established (Steedman 1993b; 1994). In 1915 a number of inhumations of Anglo-Saxon date were found at Riby (White 1982).

A significant Middle Saxon site (c. AD 680–850) has recently been identified at Little Carlton, south-east of Louth, occupying a rise in what was then a wetland context within the Middle Marsh. The site has been subject to systematic metal detecting, geophysical survey, LiDAR study and sample excavations (Townend *et al.* 2016). Coins from the site are mostly sceattas of c. AD 680–790, with a well-preserved sceat dating to AD 725–745; the occupation is thought to continue to c. AD 850 (Townend *et al.* 2016, 30 and 34). Further afield, the extensively excavated site at Flixborough, near Scunthorpe, is a major point of reference for studies of the period in Lincolnshire particularly for the Middle Saxon era (Loveluck and Atkinson 2007).

Recent development led archaeology on the lowlands of North-East Lincolnshire has resulted in several discoveries. Work at Stallingborough has revealed two Anglo-Saxon sites at its centre, while another possible site seems to have overlain a Roman site in the Middle Marsh (excavated 2017, report forthcoming). A further site in the Outmarsh has a possible grubenhaus (pers. comm. Hugh Winfield Dec. 2017). Ditches of this period have been found elsewhere, at Grimsby, Healing and Weelsby, with the latter indicating a possible farmstead very close by; Ipswich ware is present at some of these locations, including Riby Cross Roads (pers. comm. Hugh Winfield).

Focusing on the Central Wolds/Waithe valley in particular, there are few known monuments from this period (cf. Willis 2013, section 1.10). The monument record has eight Anglo-Saxon entries which include a possible moot and the suggestion that Binbrook was a Saxon foundation. Otherwise the record has a smattering of pits, burials and churches. No settlements are suggested. On the face of it, the most eye-catching find is that of twenty cremation urns placed in relation to what was described as a barrow in Swinhope (TF 226 967; Lincs HER 51871). However, the find was made in 1828 and the find-spot is now not clearly known.

The apparent lack of any direct settlement before the mid- to late Saxon period has been noted (cf. Willis 2013, section 1.10). There are familiar endemic challenges to identifying early Anglo-Saxon settlement here as elsewhere, given the nature of the building materials used (timber and other organics), the low frequency of pottery use and the overall lack of discernible ‘footprint’. The RCHME study concluded that in West Lindsey in particular, and perhaps Lincolnshire more generally, there was a lack

of continuity in Saxon occupation sites with mid- to late Anglo-Saxon villages being abandoned (Everson *et al.* 1991, 37). This contention should, however, be measured against the evidence from the extensively and intensively examined Saxon site at Mucking, Essex, where the centres of occupation shifted during its occupation (Hamerow 1993, 86). In an earlier review Richards (1993, 530), noted that Hamerow’s findings were of considerable importance, especially with regard to the model of a Middle Saxon settlement shift. The Mucking evidence showed the need for scepticism over the view that most excavated Saxon settlements at some point ‘failed’, or that sites were abandoned by the end of the seventh century; rather there was a rhythm of periodic shift of settlement location (cf. Richards 1993).

If, however, villages have remained rooted to the same position the insubstantial (organic) nature of early buildings and the churn associated with constant rebuilding will leave little or no remains. Beresford mentions Northolt as an example and Wharram Percy as another instance where the settlement migrated (Beresford and Hurst 1971, 78, 127). So perhaps the settlement is there in plain sight and the Monument Record may be right in its approach that suggests Binbrook is a site founded in Saxon times where the evidence is slim and speculative. One settlement certainly ‘founded’ in the Saxon period was Normanby le Wold on the crest of the Wolds scarp west of the Waithe valley, where finds and excavation evidence can be cited (Addyman and Whitwell 1970). No buildings of this period, however, have been recorded in the Waithe valley. Yet, given the layout of some early medieval settlements such as the excavated site at Simy Folds, Upper Teesdale, County Durham (Coggins 2004, fig. 2), it is worth noting that there is some morphological similarity with the plots from aerial photography of the sites in the area under consideration here such as at Stainton-le-Vale (TF 185 935) and Welton le Wold (TF 259 866), presently attributed to the Roman era and classed as minor settlements or farmsteads though not explored through excavations (Jones 1998a, 77, figs 9 and 11). Could these sites be of early Medieval date or include such phases? This is especially pertinent given that the morphology of the site at Hatcliffe Top (as revealed through geophysical survey) is akin to that of these complexes and it has yielded firm evidence of Anglo-Saxon and mid-Saxon activity (though the features on the geophysical record seem wholly not to relate to those phases of activity).

Despite Lincolnshire forming part of the area politically controlled by Danes from AD 877 there are no monuments attributed to or associated with

them in or around the Waithe valley. Whilst there are no monument records, the name 'Waithe' is itself formed in part from a Scandinavian word 'vað', meaning ford (Sawyer 1998, 18). This does not mean that Waithe was a Scandinavian foundation merely that the influence on the language used was sufficient to determine the place name. The coin of Worden from Corner Field, Hatcliffe Top, minted in Ribe, Denmark, is too early in date to be relevant in this connection. The question then arises as to how densely the Waithe valley was occupied by Scandinavians. Place names such as Beelsby that include a suffix of 'by' (settlement in Old Norse) coupled with a personal name are indicative of a Danish presence. To demonstrate density more convincingly perhaps, as there are a range of scenarios for Saxon/Norse settlement, is the use of Norse words for field names. These are first recorded in the 12th century, as is the use of Norse personal names, developed in Britain, indicating a language in use by farming people in the area. Tellingly the number of Norse place names in areas quickly recaptured by the English is lower (Abrams 2004, 402 and 404); Sawyer (1981), however, argued the reverse: that English was spoken.

Sheffield University's fieldwork in the early 1980s at Ash Hill long barrow, Swinhope, produced a radio-carbon date of 1090 plus or minus 70BP cal to AD 885-1010 for human skeletal remains for what was evidently a secondary burial event, and was classed by the excavators as Viking age (Phillips and Walker 1989, 169). A corpus of finds and settlement evidence from Lincolnshire has been brought together for the Viking period (Harkel 2010). In a recent article metal-detected finds from Binbrook and Swinhope parishes, including weights and counters, have been associated with this period (Hadley and Richards 2018, 13, fig. 9).

This area of historic Lincolnshire has several churches where a Late Saxon origin is established or suspected. With the latter caution is required until more research has been undertaken and so a Saxo-Norman bracket might suffice for the present (pers. comm. Hugh Winfield). Whilst none are identified on the Waithe valley through the Wolds they include the nearby churches at Cuxwold, Swallow and Rothwell, on the Wolds, and at Waithe in the Marshland. All have similar Saxo-Norman work in their towers and in some of the nave. These elements at least were built according to Taylor just pre-Conquest, although a date of 1080 to 12th century for initial Norman church building is suggested elsewhere (Taylor and Taylor 1965; Berg and Jones 2009, 23-4), on the basis that military construction was the Norman priority. The argument is also made that the detectable Saxon features arose because masons of the transition

period worked in a Saxon heritage-tradition. All these churches show similarities in dimensions, best expressed using old imperial measurements: towers 10 feet to 10 and a half square internally and walls 2 foot 8 inches to 3 feet 6 inches. Victorian rebuilding may have obscured more features at these and other Waithe valley churches. Meanwhile, some stone sculpture from the Saxo-Norman overlap exists. Beelsby has a grave marker, round headed on a tapered shaft with a cross pattée in low relief with a similar example re-used in the north arcade of Cuxwold (Everson and Stocker 1999, 275 and 317). This raises the question of Norse incursion, settlement and traditions: if Norse settlement was widespread on this eastern fringe of Lincolnshire bordering the North Sea where did the local Anglo-Saxon building tradition survive?

Excavations at the Saxon and later church at Holton le Clay, on the Marshland, just to the north of the course of the Waithe, in the mid-1970s, yielded evidence suggesting a long sequence: Roman material indicated farming and occupation on this area of glacial moraine, followed by mid-Saxon occupation, in turn succeeded by burials of Late Saxon date, themselves preceding the establishment of the church c. AD 1060 (Sills and Heath 1975; Sills 1982).

2.2.4 The Medieval Period

Steven Willis and Jon Daw

In contrast to the preceding era there is a comparatively dense distribution of settlements on the Wolds of Medieval date; likewise the documentary record both generally and locally is helpfully illuminating in places.

Villages and hamlets were located in particular in valley bottoms. They were founded at different times, in some cases perhaps around an existing sacred focus; some flourished, others failed. Some were later rather than earlier foundations and can be discerned where a deserted village (DMV) itself overlies medieval rigg and furrow cultivation, for which there is evidence from the region (Everson *et al.* 1991, 13). Settlements were re-planned and replaced throughout the period often with 12th century additions. Some parishes were poly-focal resulting from villages shrinking or comprising groups of co-existing hamlets. The presence of a Cistercian Grange at Thoresway (TF 167 962) is an example of this, giving a second settlement focus (Everson *et al.* 1991, 43).

The Black Death was not the only cause of village abandonment or contraction. Swallow (TA 175 030), a settlement to the north of Hatcliffe village was

almost depopulated by plague (Everson *et al.* 1991, 38) but at Orford, regularly planned along a street, settlement may have been completely moved by the foundation of the Premonstratensian priory (Everson *et al.* 1991, 181; cf. 2.2.2.2). The idea that Malthusian checks resulted in rural de-population in the period after 1300 has been discredited by Harvey (1966, 40) who suggested that evidence for marginal land going out of production is lacking, and that wool exports remained high and wages increased. Acknowledging a population decline from 1320 she suggested instead that the pull of the towns was a factor in rural population decline. The rural and urban populations significantly decreased as a result of the Black Death; Swanson (1999, 17) estimates countrywide a reduction of a third in population and a recovery period of a hundred and fifty years. Using the Poll Tax returns from 1346/7 and 1351/2 a reduction of two thirds of the taxable population was noted by Britnell (1994, 200). As well as Swallow, Thoresway is cited as a village almost completely depopulated (Everson *et al.* 1991, 38). Settlement vitality or otherwise, was, however, an ongoing process of change.

Turning to agriculture, historical records are patchy for the Waithe valley area but can be highly informative. The estate accounts of Henry de Lacy dated AD 1295 and 1304 show the crops on estates from Waithe as barley and fleeces but also butter and cheese; at North Thoresby he had large herds of cattle (Platts 1985, 99-100). Ideas of how estates should be managed with detailed directions for all aspects of farming are known to have been sent to Henry's grandmother by Robert Grossteste, Bishop of Lincoln in 1240 (Oschinsky 1971). The accounts of the King's Exchequer and the Wardrobe exist for the provisioning of a meeting of Parliament in Lincoln in 1301. The accounts differ in detail but it is possible to know that sheep were purchased in the Wolds and transported dead and (surprisingly perhaps) that grain purchases in the Waithe valley area were of wheat rather than barley. The Domesday Book recorded 380 mills in Lincolnshire (Platts 1985, 73); some were held jointly (Foster and Longley 1924, 64). At Croxby the Domesday Book records that a mill had been recently built. By the 14th century the wool trade was at its height with large flocks grazing the Wolds.

Part of the wealth generated by the wool trade was divinely invested through enhancement of local church fabric. This expression is seen in several Waithe valley churches, as at St Helen's at Brigsley, where windows were altered, at St Helen's, Swinhope, where a clerestory was added and the chancel rebuilt, again with alterations to the window tracery, and at the

church of St Mary in Hatcliffe, where a parapet was added and windows altered. A churchyard cross occurs from the same period at Binbrook (Mansel Sympton 1915, 133; List Entry Number: 1147865). Religious houses were widely established over the Wolds and eastern Lincolnshire during the Middle Ages but amongst these only one was established in the Waithe valley proper, with another at West Ravendale (Page 1906, 243-4). The former was the 12th century priory built in Henry II's reign by Rulf D'Albini at Orford (Page 1906, 209). The priory lasted until the Henrican surrender was made in 1539.

2.2.5 Post-Medieval to Modern Times

Steven Willis with Jon Daw

The early post-Medieval period is thinly represented in the structural record. Current buildings may contain earlier cores but if so are unrecognized or pass unrecorded in the listing descriptions. More particularly the wholesale and perhaps repeated reconstruction of farmsteads in the Early Modern and Enclosure/Improvement era may explain the lack of buildings in the records. This will be compounded where replacement building occurred on the same site. A house platform in Swinhope is conventionally taken to indicate a probable substantial house, demolished by 1785 (Swinhope House, Monument No. 353293) prior to the construction of a building across the valley. The house platform is associated with earthworks suggested to indicate gardens and landscaping features. The earliest standing buildings in the Waithe valley are Thorganby Hall dating back to 1648, parts of the Old Rectory in Croxby, and a mud and stud cottage in Brigsley. Otherwise the 17th century is represented by suggested parkland.

In terms of settlement change, population numbers (livelihoods) at Thoresway were again impacted in the 15th and 16th century by agricultural conversion to sheep walks (Everson *et al.* 1991, 194). Kirmond le Mire saw a terminal decline in settlement which is likewise attributed to the creation of sheep walks in the 16th century, a suggestion supported by the discovery of post-Medieval pottery dating to the time the remains were destroyed (TF 1878 9239, Monument No. 893056). In all these cases caution is required as determining when a village was deserted or shrank, and dating that to a specific period is difficult, as such precision is hard to attain without excavated evidence or some written record. Swallow (cf. 2.2.4) was to shrink further in the later 17th century.

By the 18th century farmhouses and farm buildings first appear in the monument record. This is a reflection of agricultural improvement, something seen widely in Britain during this period, but particularly apparent in the case of the Wolds, with land reorganization and investment in farm building. Enclosure was undertaken because, according to the Enclosure Act in the case of Fulstow (to the immediate south of the Waithe beck on the Middle Marsh), 'the lands and Grounds of the several proprietors ...lie inconveniently dispersed, and intermixed with each other, and are in general so disadvantageously circumstanced as to render the Cultivation and Management thereof very difficult and expensive...' (Russell and Russell 1983, 11). The process extended from the 16th century in piecemeal fashion with land in parishes sometimes enclosed in stages. Some enclosure was voluntary, some by Act of Parliament. Acts were required where ownership was dispersed; where parish land was in a single estate or held by a few large landowners the change was undertaken without enabling legislation. Waithe parish was enclosed between 1807 and 1811 (Russell and Russell 1983, 106-7). The effect was to turn large open fields into a patchwork and to disperse farmhouses so that they were close to the land. This is why so much of the existing rural building dates from this period. As the landscape remained intimately entwined with the will of owners and landlords indicators of fashionable pursuits by the local gentry are not surprising; thus Scallows Hall, Binbrook (List Entry Number: 1063130) was built as a hunting lodge with stables and coach house in 1780 by Lord Grimthorpe.

In the 1760s Arthur Young, the Secretary to the Board of Agriculture, had been disparaging of Lincolnshire farming, yet by 1799 farmers here were seen as the 'best cultivators' (Rawding 2001; 2009, 40). The Crop Return for 1801 shows that in the central Wolds turnips were the main crop, largely as fodder for sheep. With the ending of the Napoleonic War and the advent of cheap cereal imports the period of 'High Farming' ended. Despite this development, the early and mid-19th century saw a population increase on the Wolds, peaking in the mid-Victorian era. The population of Binbrook, the largest village in the central Wolds, rose to 1334 in 1861 but fell thereafter with a drift to urban centres. The steady decline continued till the start of the Second World War, the population being 738 in 1931 (Rawding 1989; 1991, 4). This change was linked with a general decline in agricultural profitability from the mid-1870s, triggering a period of shift in husbandry, with land being turned over to grazing

from arable in general through Lincolnshire and in the central Wolds, being reflected in increased numbers of sheep (Rawding 1991, 8-9).

A steady shift to mechanization is apparent with Mr Holdgate in Thoresway installing a water powered threshing machine from 1816, the mill wheel located on the other side of the road to the farm buildings (List Entry Number: 1063480). Milling was also catered for by windmills. One in Binbrook built in 1879 lasted until demolition in 1938. Located to the west of the High Street it was an example of a characteristically tall Lincolnshire windmill that had originally four sails, reduced to two following a lightning strike (Rawding 1991, 28-9). Small agricultural machine manufacturers existed in some larger settlements on and by the Wolds, with Giles Iles and William Hunter listed by White (1969, 474) as machine makers at Binbrook. By the turn of the 20th century other changes were taking place and electricity was making an increasing impact. In the case of Thorganby Hall the breast shot watermill built in the 19th century as a corn mill (Lincs HER 56421) was converted to power an electricity generator for the house (Sass 2005).

The years up to and including the Second World War saw the development of airfields in Lincolnshire. An extensive airfield at Binbrook (TF 19 NE 72), was commissioned in the late 1930s and open from 1940, with specialised ancillary structures. It survived operationally into the Cold-War period although is now de-commissioned (Hancock 1978, 111-2; Halpenny 1981, 42-7). The skies over the Lincolnshire Wolds were a war zone during the First and Second World Wars. In the course of the Second World War there were many crashes of aircraft either through air battles, anti-aircraft fire or accidents. Two crashes are recorded at Rothwell Top (Finn 1973, 61 and 81) near the site of the Roman Roadside Settlement reported in volume 1 of the present monograph series (Willis 2013). A crash as a result of an accident occurred at Hatcliffe Top in December 1943 involving a Lancaster bomber, to the south-west of Top Buildings, just south of Home Field+. Of the crew of seven only three survived. A memorial stone was erected at the site at the instigation of Mr Roger Stephenson and a part of the local history museum at Waltham Windmill documents the event and those extraordinary times.

The monument record for the Waithe valley finishes, for the present, with a telephone box to Sir Giles Gilbert Scott's 1935 K6 design standing in the market place of Binbrook.



Fig. 2.4 The Waithe valley near Brookenby looking east. The Neolithic Long Barrow known locally as 'Cromwell's Grave' lies below the clump of trees on the horizon, to the right of the photograph.

2.3 The Waithe Valley and its Landscape

2.3.1 The Waithe Valley through the Wolds

The Waithe Beck has many tributary sources though its principal origin is the southern head waters north-west and north-east of the modern village of Ludford between Kirmond Top and Thorpe Top. Here a series of springs issue, some of which are named, such as Adam's Head Spring and Buttermilk Spring in Thorpe le Vale. There is little settlement in this area today but to the east of the Caistor High Street (B1225) north of High Street Farm is (as plotted to date) a small cropmark complex of irregular rectilinear form suggested by Jones to potentially define a Romano-British villa (Jones 1988, 28, fig. 8; 1998a, fig. 4, TF 180 905). Although the present author knows of no firm evidence for such an attribution extensive surface finds of Roman pottery are attested with Claxby Ironstone fragments removed to hedgerows. Another likely site of Roman activity/occupation lies a little to the north at TF 181 911 from where later Roman

pottery has been recovered together with tile (Wilson 1971, 8). Around 700-900m to the east of the former complex, immediately above the headwater spring at Far Dickey Crook are cropmarks listed by Jones in his survey of long barrows and Neolithic elongated enclosures, with two large rectilinear enclosures nearby, potentially of Romano-British date (Jones 1998b, 93, 96, 110, gazetteer no. 37, fig. 6). There were no records of finds from this area recorded by the PAS when a search was undertaken in late August 2017 (26.8.2017).

The first settlement down from these head springs, at a distance downstream of around 2km, is that of Kirmond le Mire. This settlement is listed in the Domesday Book as *Cheuremont* and there are various spellings through the medieval period into the Early Modern era including *Keuermunde* which Cameron interprets as Norman-Picard French meaning 'the goat hill' by the wetlands (Cameron 1998, 75). Today Kirmond le Mire has a church but few residences. The striking mid-Victorian brick built model farm by the Manor building, indicative of mixed farming at that location at the time, visible from the Tealby to Binbrook road is now unused (Willis 2013, 16-7). On the east side of the valley, on the fairly steep slope above the Manor, are some eye-catching

earthworks likely to be cultivation terraces, though of uncertain date. The Roman villa at Kirmond le Mire lies around 500m downstream from this present settlement, by the confluence of the beck with a tributary stream from below Bully Hill Top to the south-west; the limited evidence from this villa site is outlined above (Section 2.2.2.2).

The middle tributaries of the Waithe rise north-west of Kirmond le Mire above Stainton le Vale and Stainton Hall (TF 165 947) with the steep and deep valley heads here wooded with plantations. Several springs occur but upper valley heads are dry. On the south side of the valley above Stainton le Vale, either side of Nimbleton Plantation, are two cropmark features suggested to be long barrows by Jones (Jones 1998b, 111, gazetteer nos 44 and 45). Both occupy upper slopes which will have made these monuments visible from the valley, rather than higher positions which would have removed them from sight from a valley location.

Stainton le Vale is listed as *Stainton* in the Domesday Book and means, Cameron advises, 'the farm or village on stony ground', with 'le Vale' being a recent variation of a series of topographically descriptive affixes employed to differentiate it from other regional settlements of the same name (Cameron 1998, 116). A DMV at Stainton le Vale is discernible from extant earthworks and is extensively mapped from aerial photography (Everson *et al.* 1991). The church of St Andrew at Stainton le Vale has, according to Mee, a surviving Norman doorway, that opens to the vestry, and a 13th century arcade (Mee 1992, 355). This small church is built mainly of Claxby Ironstone.

Between Stainton le Vale and Orford the natural stream course had been regularized to produce straight stretches of water course in the area either side of the location known as Ash Holt (Allen 2003). Around this area Mr David Everatt had reported a Neolithic stone axe find at c. TF 184 941 (Whitwell 1967, 32). The middle and southern tributaries of the Waithe join at this location. Several small enclosure type cropmarks are documented, although not firmly dated. These are best seen in the Desk Based Assessment produced by Allen, now available online via the Archaeological Data Service, where they are mapped and ascribed by Allen as of likely prehistoric date (2003, table 1 and fig. 1). More recently the Lincolnshire Chalk Streams project has instituted re-naturalization features to the course of the water in this locality (cf. Allen 2003; Lincolnshire Wolds Countryside Service 2016, 15-9; 2017, 15-9).

Orford lies near the confluence of the middle and southern feeder streams of the upper Waithe. On the lip of the valley to the north side of Orford, as the land then rises and plateaus to form the area used for Binbrook airfield, is a trapeziform cropmark

suggesting the location of a long barrow monument; aerial photographs showed the survival of associated features in 1995 (Jones 1998b, 92, 112, gazetteer no. 51, fig. 5).

Orford features in the Domesday Book as '*Erforde*'. Cameron takes the meaning in Old English as 'the ford of Era' (Cameron 1998, 94) though Coates sees it as 'Irishmen's ford' (Coates 2009, 62), presumably for crossing the Waithe Beck. The Wolds and eastern Lincolnshire more generally had a number of ecclesiastical houses prior to the Reformation (Everson *et al.* 1991) and at Orford there was a Nunnery (Orford Priory, Lincs HER 50709) and also a medieval settlement abandoned in the 14th century that is now a DMV (Lincs HER 50708, TF 1977 9464; Everson *et al.* 1991, 180-1, fig. 128). Again the remains of these establishments are to some extent visible through extant earthworks but importantly too, via air-photography. Between Priory Farm and Orford Bridge are three created ponds, close-by the Beck, including one known as 'The Lobby' now used for recreational fishing. Doubtless their original purpose was to supply fish.

Two Roman sites in this vicinity are mentioned in more detail above (2.2.2.2). To the north-west of Priory Farm around the 95-100m contours is the site known from air photography (TF 191 946; Lincs HER 54191) comprising a highly regular enclosure complex of rectilinear form. On the opposite side of the valley, c. 270m south-west of Orford Bridge, a scatter of Roman finds has been recorded (at c. TF 202 944) including coins and pottery.

To the south-east from this point is Binbrook, on the south side of the valley, which is now the largest village in the northern half of the Wolds, and formerly had a market. Binbrook appears as '*Binnibroc*' in the Domesday Book meaning, for Cameron, in Old English 'Bynna's brook' (Cameron 1998, 14). The present village is mainly focused on the western slope of a tributary valley, with the church of St Mary and St Gabriel at the floor of the valley. This, topographically, is a somewhat similar setting to the neighbouring site of Kirmond le Mire, and indeed Roman pottery and other finds have been recovered by detectorists from arable fields on the eastern slope of the tributary valley, south of Binbrook village. The present church has a joint dedication as it replaced two earlier churches. On the opposite side of the valley lies Brookenby, a modern settlement that has developed from the presence of the former RAF station at Binbrook airfield, including former RAF housing.

To the east of the village is Binbrook watermill, known historically as Cock Mill. The mill was fed

by a diverted tributary stream of the Waithe known as 'Grasshills' which rises just south of the village. The stream was in part diverted to the mill by a leat which is still extant (Tyszkla 2000, 4). Beyond the mill this feeder joins the Waithe in a canalized section of its course below Hoe Hill. The watermill was working at the start of the 20th century when it was run by the same family who owned the windmill and bakeries in Binbrook but milling had ceased by 1920 (Rawding 1991). The fields between Orford Bridge and the mill are grazing meadows, presently home to two flocks of rare breed types of sheep: Hebridean and Castlemilk Moorits.

This mid-point area of the Waithe valley in its course through the Wolds has a concentration of long barrows and putative long barrows/prehistoric elongated enclosures. Across from Brookenby, on the south-east side of the valley at Hoe Hill is the long barrow known as 'Cromwell's Grave' or 'Hoe Hill 1' (TF 215 953). It gained its colloquial name as by local tradition a Roundhead soldier of the Civil War was buried there. This is an upstanding feature (albeit colonized now by trees and badgers) which lies perpendicular to the alignment of the valley at this point. A second similar monument 'Hoe Hill 2' lay immediately to the north-west of this upstanding barrow (i.e. further down-slope) on the same alignment but is now flattened (Jones 1998b, 92 and 112, gazetteer nos 52 and 53, fig. 6). With other cropmark features to the north-east, including another elongated enclosure, and south-west (cf. Jones 1998b, 112, gazetteer no. 54, fig. 6) this was evidently a long-lived and significant focus, with a sequence established at Hoe Hill 1 (cf. Phillips 1989a, especially chapter 2). These features will have been used for, presumably, burial, ceremonies and as a cultural and landscape marker.

Another long barrow occurs on the north side of the valley at Ash Hill 1km north-west of Hoe Hill (TF 208 962; Jones 1998b, 113, gazetteer no. 56) and it was likely they were visible across a valley largely cleared of trees during their earlier phases. Both monuments were subject to survey and sample excavation in the 1980s, with a focus on their flanking quarry ditches and the recovery of cultural material, dating evidence, and in particular environmental data (Phillips 1989a). Radiocarbon determinations for both sites were consistent with an origin in the Early Neolithic (Phillips and Walker 1989, 170). Lithic finds from the Waithe valley at this location supplement these data (Phillips 1989a; 1989b). Palynological and molluscan evidence together with soil analysis enabled environmental reconstruction. At Hoe Hill these indices pointed to a milieu in the Earlier Neolithic at first of herbaceous rich grassland with patches of scrub

or isolated bushes and/or trees, then seeing more scrub woodland with more restricted areas of herbaceous vegetation; from the Late Neolithic to Iron Age the evidence showed regenerated woodland; in the Roman or immediately pre-Roman Iron Age the area was grassland with some scrub; and in the Post-Roman to Medieval era there were episodes of ploughing and less stable pasture (Phillips 1989a, 103). A broadly similar picture was established for Ash Hill: in the Earlier Neolithic the environment was one of rich herbaceous grassland with patches of scrub; in the Late Neolithic this was grazed grassland; from the Bronze Age to the Roman era scrub woodland with reduced patches of open ground prevailed; and in the Post-Roman and Medieval era the environmental data indicate a ploughed landscape (Phillips 1989a, 110). Hence the landscape of the Waithe valley lacked trees in the Early Neolithic, and it is likely this was because they had been cleared for agriculture using hand-axes of the type mentioned below (Section 2.3.5) and illustrated in Figure 2.8.

Continuing eastward along the valley, Swinhope is '*Suinhope*' in the Domesday Book meaning, according to Cameron, in Old English, 'the secluded valley where swine are found' (Cameron 1998, 122). In assessing the evidence arising from the University of Sheffield's fieldwalking transect in the area between 1983-7, which concentrated on lithic evidence, Phillips concluded that the majority of the finds from around Swinhope pointed to Early Neolithic activity with some presence in the Late Neolithic (Phillips 1989b, 36).

There was a former settlement on the south-east side of the valley (c. TF 219 962 to 222 961), below the rise known as Crow Holt, in the Medieval period, for which there is now no visible trace, for the area is under arable cultivation (cf. Phillips 1989b, 55), although features occur as cropmarks. This DMV was destroyed in 1969, though surface finds of pottery indicate an eleventh to fifteenth century date (Everson *et al.* 1991, 191, fig. 135). Within the area of the Medieval occupation Jones interpreted air photographic evidence (at c. TF 222 961) as suggesting the presence of a Neolithic long barrow and a Roman villa, specifically to the south-east of the Binbrook to Barton Street road (Jones 1998a, 73-5, fig. 6; 1998b, 112, gazetteer no. 55) although the DMV extends on the opposite side of the modern road too, towards the Waithe. This location is indeed, accordingly, known to members of Grimsby Metal Detecting Club as 'three settlement field' on the basis of finds recovered over many years. The cropmark evidence for a long barrow is reasonable (Jones 1998a, 75; Bewley and Jones 1992, 42, fig. 4) and indeed there is an anomalous 'bump' in the field

surface at around that location. A strong element in Jones' interpretation that this was the site of a villa are the rectilinear enclosures seen on aerial photos and the presence of Roman pottery noted by Phillips (her field 'S0002' Phillips 1989b, 53-5). However, the case for this location being the site of a villa is far from confirmed. An extensive walkover survey by the author for several hours in September 2008 yielded few finds and almost nothing of Roman date (cf. Willis 2013, chapter 8). The fieldwalking data published by Phillips, arising from systematic survey, mentions only 31 pottery sherds from this area of both Roman and Medieval date (Phillips 1989b, 55), an outcome consistent with survey of the field in 2008. Roman finds are said to have been collected from the site via metal detecting so perhaps this locality was a focus, like that at Round Hill, by Hatcliffe village, where metal items are 'lost/given up' but there are no ceramics, as it was not a settlement (cf. Chapter 10). Prehistoric finds were present but characterized as "sparse" on the side of the modern field containing the putative barrow but much more frequent on the western slope opposite this cropmark and other cropmark features (Phillips 1989b, 53). A total of 186 flints were collected by Phillips and her University of Sheffield team from this large field including 33 cores, 130 flakes, 12 scarpers 1 arrowhead and 10 other retouched items (Phillips 1989b, 68). It seems likely that Phillips and her team were unaware of the possible flattened long barrow at this location as she does not mention it (presumably it had at the time yet to be observed or mentioned by Jones). It seems there was some Roman activity at this location but artefact evidence in terms of pottery and structural debris (few sherds and an absence of Roman brick and tile etc.) indicates this is likely to have been low level or a focus not of settlement but some other activity. Details of a number of the metal finds recovered from this site in the past are documented on the PAS. A few 100 metres to the south, nearer to Hoe Hill Farm, TF 219 954) finds of Roman pottery and cropmarks have led to the suggestion of the presence of a Roman villa (Lincs HER 51779).

There is little settlement at Swinhope in present times. The small church of St Helen, which has features dating to the 13th century (Mee 1992, 378) is, today, virtually isolated. A medieval settlement had existed here but this now only survives as traces of a DMV below topsoil (at the so-called 'three settlement field' and its neighbour closer to the beck). Opposite the church, on the west side of the Waithe, is Swinhope Hall, a large 18th century house set in parkland.

Further along the Waithe valley lies Thorganby. A settlement here appears in the Domesday Book as '*Turgrimbi, Turgrebi*' and hence for Cameron 'Thorgrim's farmstead or village' in Old English (Cameron 1998, 125). Thorganby had several watermills at the time of the Domesday record (Pawley 2001, 44-5). The small church has been restored but dates from the 13th century (Mee 1992, 389). Thorganby is another DMV site lying either side of Thorganby House Farm (Everson *et al.* 1991, 200, fig. 140). Thorganby Old Hall, set in parkland on the east side of the valley, was raided by the Cromwellian forces in the English Civil War (Mee 1992, 389). By the drive to the Old Hall, on the west bank of the Waithe is a further long barrow (this would appear to be Jones' site 57 (Jones 1998b, 113, gazetteer no. 57)). North from Thorganby the Waithe enters a winding incised valley known as Deepdales, a cut exaggerated by glaciation and post-glacial melt waters (see Section 1.2.3 above) before turning north-east to Hatcliffe village.

2.3.2 The Thoresway Beck Valley

Thoresway Beck is the northern tributary stream of the Waithe, separated from the tributaries to the south by the long plateau-topped spur on which the Binbrook Airfield was constructed. The headwaters for Thoresway Beck lie at the small linear village of Thoresway where there are several spring points, with more springs further down the course of the valley, as at Black Springs, c. 1km east of Thoresway. According to Cameron whilst Thoresway has been conventionally taken to mean "Thori's road" an alternative possibility is "the shrine dedicated to Thor", and if so would relate to the earliest Danish settlement of northern Lincolnshire (Cameron 1998, 125). Parts of the medieval village at Thoresway survive as visible features in grassland south-west of the modern village at around TF 167 962 (cf. Phillips 1989b, 60; Everson *et al.* 1991, 194-7, fig. 138). The parish of Thoresway was enclosed between 1815 and 1817 and the Enclosure Award records that prior to Enclosure the parish contained "open fields, warren, commonable and waste lands and certain old enclosures" (Russell and Russell 1983, 100-2). An interesting aspect of Russell and Russell's post-Enclosure map showing the features of the parish in 1817 (Russell and Russell 1983, 101) are the changes in the roadways to and from the arterial north-south Caistor High Street on the west side of the parish. At that time the Thoresway to Normanby road followed the valley known locally as 'Roman Hole'

before making a steep ascent to the main road; but this has subsequently been altered and the valley is bypassed by a straight replacement road which exits the valley for higher ground more than a kilometre to the east of its previous course. Likewise the Rasen and Rothwell road on the 1817 map which followed a valley to Rothwell is now replaced, by the Caistor High Street, with a straight road to Hill Brough Farm (formerly Lodge House) and the former road through the valley is now only a bridleway track.

The church at Thoresway was largely rebuilt in the 19th century but is reported by Mee to have a Norman arch within that was once part of a tower, together with 14th century features (Mee 1992, 389). The main body of its fabric is Claxby Ironstone. Thoresway has a few small cottages of likely Ironstone build, but invariably this is concealed behind white-washing. The west wing of Thoresway Manor is likewise stone concealed by white-wash though the main part of the Manor is brick. The present owner has no information on the stone type but understands the Manor to date from the late 15th or early 16th century (pers. comm. April 2018). Most buildings in Thoresway are brick. Some garden and yard walls are Claxby Ironstone, as is part of the barn opposite the church. The farmyard wall across from the church by the main road is unusually composed of Claxby Ironstone with the coursing near the top constituted by chalk blocks, now in a rather poor condition, showing weathering and some frost shattering.

The Lincolnshire HER shows a concentration of stone tool finds in the vicinity of Thoresway. There is, for instance, a cluster of Neolithic hand-axes centred on Thoresway parish (Bennet 2009, 20 and fig. 16). This pattern is thought, in part, to be a reflection of the amount of concerted walking of the fields and observations in the area, particularly by Mr David Everatt, though not exclusively so (Phillips 1989b, 30). A flint scraper was, for instance, found to the south of the village at TF 167 962 by Mr T. Richards in the 1960s (Whitwell 1967, 32), while two stone axes found by Mr Everatt are reported in the same Notes (Whitwell 1967, 33; from TF 169 960 and TF 179 963, the former 28cm in length). On the south side of the valley, in addition to lithic finds, Mr Everatt discovered various archaeological features and artefacts during the 1960s and 1970s, reported in the early issues of *Lincolnshire History and Archaeology* under the 'Archaeological Notes' section. These discoveries included Bronze Age barrows (Whitwell and Wilson 1968, 21) and Roman pottery and other finds at several locations north, south and south-east of the modern village (e.g. Whitwell 1967, 40; Whitwell and Wilson 1968, 25; 1969, 104, fig. 3 nos 1-15; Wilson

1971, 9). The programme of fieldwalking undertaken by the University of Sheffield in the mid-1980s which sampled a transect of the Wolds between Ludborough and Claxby targeting lithic material found a concentration of lithic groups in the area walked south of Thoresway (Phillips 1989b), this being across the southern tributary valleys that feed Thoresway Beck but which are now dry. These lithic finds span chronological eras but Phillips notes that "the evidence is strongest for the Late Neolithic-Early Bronze Age periods, with a smaller component of early Neolithic activity" (Phillips 1989b, 36).

What is reported to be a large Roman site lies on an interfluvium between the Thoresway Beck headwaters system and the next system north above Rothwell south-west of Thoresway North Wold Farm (at TF 150 975). At between 135-140m OD if this was a settlement a well will have been needed, although the site at North Top, Kirmond le Mire, is in a similar location and of like elevation (cf. Section 2.2.2.2). Samian forms present (Drag. 18 or 18/31, 33 and 37) indicate activity in the earlier Roman period while fourth century Roman pottery was also noted (Whitwell and Wilson 1968, 25). A further find-site within this headwater location lies on a slope leading to the aptly named 'Roman Hole' (TF 155 965).

Just to the south-east of Thoresway on the south side of the valley at c. TF 176 967, an area known as 'The Holt', painted Roman wall plaster has been reported from the arable field along with Roman pottery, one third century and six fourth century coins, an iron knife, roof and floor tiles and other finds including coal, recovered by Mr D. Everatt (Whitwell and Wilson 1968, 25; Wilson 1971, 11). The find-site seems to have extended to TF 175 967-8 (now pasture) from where Roman pottery and other finds made by Mr Everatt and Chris Knowles of Scunthorpe Museum are documented, plus a possible chalk floor and areas of burning (Whitwell 1967, 40; Whitwell and Wilson 1969, 104). Fifteen later Roman pottery rims/upper parts of vessels were illustrated, comprising what is a significant reference group for this part of the Wolds (Whitwell and Wilson 1969, fig. 3 nos 1-15). The field with the painted plaster has a steep slope to the east and south-east and colluvium accumulation is to be anticipated in the lower part of the field where the plaster came from; possibly it was from a higher location but had moved down the slope. A field visit in less than perfect but nonetheless reasonable conditions for viewing the field surface led to the recovery of a single sherd of Romano-British greyware. Building stone fragments, which might be expected to comprise Claxby Ironstone and/or Roach, as per the buildings located at the Mount Pleasant

High Street site (Willis 2013)) were not observed, suggesting there was no stone building at this location while the absence of diagnostic tile equally suggests that if there was a Roman building hereabouts it was not roofed with tiles (nor slates) or that traces have disappeared since the late 1960s. Just to the north at TF 175 969 Mr Everatt reported the presence of stonework in the bed of the beck following dredging work and suggested the possibility that there had been a ford at this location (Whitwell and Wilson 1969, 104).

From Thoresway the valley of Thoresway Beck runs north-east and is fairly straight, only turning eastwards at its historic point of confluence with the Waithe Beck. The hamlet at Croxby, cited in the Domesday Book, lies 2.5km east of Thoresway and is the location of a church, hall and farm. Cameron suggests the name means the farmstead or village of Krok, from a personal name in Old Danish (Cameron 1998, 35). The church is recorded by Mee as late Norman with a number of 13th and 14th century features (Mee 1992, 104). Beyond the present hamlet of Croxby the valley is notably steep sided and at its narrow floor to the immediate east of the hamlet are the remains of the deserted medieval village of Croxby (Lincs HER 50539) surviving as a series of small platforms, compounds and accessways (Everson *et al.* 1991, 12, 17, 34-6, 197-9 and figs 139 and 196). Beyond the remains of the DMV the Beck has been dammed at two points to create lakes, the larger more northerly one being Croxby Pond. On the lip of the valley above the first pond on its eastern side occurs a rectilinear enclosure surviving as a cropmark; this feature has been reported by Jones who has suggested the possibility that it represents a short cursus as it has entrances on its long axis (Jones 1998b, 88, 98-9, 113, gazetteer no. 58, fig. 11). On the opposite side of the valley, above Lake Farm, overlooking the junction of two dry valleys stretching to the north and the west that, after joining, lead into Thoresway Beck, a cropmark shows an oblong enclosure reported by Jones in his survey of likely long barrows (Jones 1998b, 113, gazetteer no. 59). Around 1200m north of this feature, at the head of the northern dry valley, is the upstanding long barrow known as 'Ash Holt' (Jones 1998b, 113, gazetteer no. 60).

The Thoresway Beck valley is dry east of Croxby Pond (the second dam) for some 300m to the former point where it joined the Waithe 1.25km west of Hatcliffe village. The 1842 map shows Croxby Pond but not the other current smaller lake upstream, suggesting also that the beck still joined the Waithe at this time.

2.3.3 Hatcliffe Village

Hatcliffe village is recorded as *Hadeclive* in the Domesday Book (1086) and subsequently by variations of the name (Cameron 1998, 60). Cameron interprets this name as "Hadda's (steep) slope" from the Old English personal name *Hadda* and *clif* of Old English, and he points out that this reflects the local topography (Cameron 1998, 60). The settlement is described as a village of medium size in the Domesday Book with 18 households including nine small holders, nine freemen, meadow acres and ploughlands. There was a mill at Hatcliffe village. The village church of St Mary's is believed to date from the 13th century (Pevsner and Harris 1964, 269; Pevsner *et al.* 1989, 370-1; Mee 1992, 171). Areas of rigg and furrow are evident around the village. In 1821 the village of Hatcliffe together with Gunnerby had 17 houses and 99 inhabitants (Oliver 1829, 409). The 1841 Rent Apportionment in Lieu of Tithes record (hereafter referred to as the 'Tithe map') for the Parish of Hatcliffe records a mill in the village owned and occupied by Matthew Cunningham. The Tithe Map records that this was known as Beelsby Mill for although it lay on the north side of the village its location on the north bank of the Waithe meant that it lay within the parish of Beelsby, by the road to that village. There were few buildings and households in the village at that time but White's Lincolnshire inventory of 1856 recorded "147 souls" resident at Hatcliffe (White 1969).

In correspondence to *The Gentleman's Magazine* in November 1829 Mr George Oliver noted that the village resided "within an amphitheatre of green hills through which a rivulet winds its silent course" and that Hatcliffe is notable for the presence of "gigantic tumuli" (*The Gentleman's Magazine*, November 1829, 409). Oliver, identified these as pre-Christian and did not know whether any had been opened; of interest it is said that there were Saxon mills known in the valley and it is speculated by Mr Oliver that these may have been set up on top of the mounds (1829, 409). A very distinctive mound exists in a valley location south of the village, west of Hatcliffe Manor, which measures 30m east-west by 35m north-south, standing to a height of c. 3m, with a flat top 9m across (Fig. 2.5). This feature had been thought through the 20th century to be a potential ancient creation, perhaps a barrow, or windmill stand. Miller gives the location as TA 2118 0001 and it is marked on recent OS maps as an ancient mound (Loughlin and Miller 1979, 167). Miller goes so far as to classify this feature as one of the top three prehistoric sites in terms of archaeological potential for the whole of the 21 parishes of his



Fig. 2.5 The likely barrow, known as The Mound, near Hatcliffe Manor, south of Hatcliffe village; view looking west.



Fig. 2.6 The Waithe between Hatcliffe village and Waterdell.

Cleethorpes district (Loughlin and Miller 1979, 162). Whilst this may relate to the features noted by Mr Oliver some caution is necessary at this general location given the complicated glacial channelling and depositional history at this point in the valley, south and south-west of the village; Straw particularly notes the “hummocky valley-floor sediments” hereabouts (Straw 2008, 14 and 6). That said this specific mound appears to be a human creation. The Mound is scheduled on the assumption it is a round barrow (SAM 1019866; HER 0439/1/0) though the specific evidence is somewhat equivocal. Its profile is unusual and suggests modification (if a barrow). The former Archaeological Officer for NE Lincolnshire, Hugh Winfield, observed that an aerial photograph in the HER from the 1940s suggests that part of the monument may overlie rigg and furrow cultivation (pers. comm.). Photographs held on the HER from this time also suggest a potential surrounding ditch. Hugh Winfield also noted that the historic name for the field in which The Mound is situated is ‘How Close’ (as recorded on the Tithe map of 1841) from the Old Norse word ‘haugr’ meaning mound, indicating that there was probably a known mound (or mounds) here deep in the past. The field was ploughed in the 20th century but with no surface survey undertaken. The field has been returned to pasture. Hugh Winfield further posited as to the possibility this is a barrow that had been open/disturbed by antiquarian activity and then perhaps restored or reshaped for aesthetic reasons by the Manor owners. Roman tumuli at Tienen-Grimde, Belgium, opened in the late 19th century and completely taken down to ground level, were then subsequently re-made, to preserve the location and impression of a burial mound (Hensen 2010). The Mound near the Manor is in a prominent topographic location (cf. Fig. 2.5), consistent with the siting of similar monuments. Equally, from its position, a wide viewscape is possible, for instance, to the Waithe and to the north-west, to the Bronze Age barrow cemetery near The Thatches, south of Croxby Road overlooking the point of confluence of the Waithe with the Thoresway beck (cf. 2.2.1; HER 0098/1/0). Cropmarks indicating ring ditches and therefore perhaps further barrow locations occur near to The Mound (HER 0439/2/0). This feature represents an interesting case of data and interpretation, with questions remaining despite a coalescence of different information types colouring the picture.

East of Round Hill the Waithe is joined by what is now a minor tributary stream issuing from the narrow, steep sided, Hatcliffe Planation valley. The origin of this feeder lies further south beyond Priory Farm, along a channel that leads to Wold Newton 5km south

of the Waithe. On the rising ground east of Hatcliffe Planation valley, c. 450m south-east from The Old Farm, a cropmark indicates an enclosure (HER 0686/1/0).

Recently (spring 2016) Chris Blair-Myers pointed up from air photographic evidence a group of apparent ring ditches at a midpoint in the Waithe valley between Hatcliffe village and Waterdell that might appear to the untrained eye to represent a flattened barrow cemetery (TA 2235 0175). These features are unlikely to be what Mr Oliver was referring to in his correspondence as they are really a set of looping dug channels (artificial meanders), a comparatively recent feature to improve drainage/water flow in a pasture field in the valley bottom.

As the Waithe passes out of Hatcliffe village, downstream, it passes below Round Hill on its south bank, defined by deep glacial valleys (Section 1.2.3). This is the location of the corpus of metal items collected by Stan Little that are considered in Chapter 10. The Waithe valley between Hatcliffe village and Waterdell broadens and shows marked chalk downland valley features. It then narrows to a channel as it approaches Waterdell with steep sides and a flat floor, with head deposits. Glaciation and post-glaciation processes have made these features even more pronounced at this location but mirror some other adjacent valleys as they exit the Wolds on the eastern side, as at Hubbard’s Hill on the south-west side of Louth (Robinson 2009b).

2.3.4 Waterdell

The Waithe exits the Wolds immediately to the north-east of the site discussed here as the steep-sided valley opens to the Middle Marsh. This opening is known today as Waterdell (TA 229 025) and the A18 road dips here and curves as it traverses the valley bottom and bridges the Waithe. This is a point where four parishes meet: Ashby cum Fenby, Barnoldby le Beck, Beelsby and Hatcliffe. Waterdell is the location of an historic watermill and the 1841 Tithe Map and the 1880s Ordnance Survey map show a mill at this location (TA 22935 02429), on the south side of the beck, by the valley slope, described in the latter as ‘Hatcliffe Mill (flour)’. The present structure dates probably to the 18th century and there is a stone indicating a date of 1774, though there may have been an earlier mill at this site before that date. Watermills often demonstrate a continuity of location for obvious reasons. There is likely re-used stone in the fabric of the present structure such as a medieval round arch stone which Graham Collins (pers. comm.),



Fig. 2.7 View looking north from the south-west corner of the field known as Mill Close to the Waithe valley just west of Waterdell. The location of the former trackway can be seen in the pasture running left to right before the ground falls away steeply to the valley below, populated with a variety of trees. A former chalk quarry, still open, lies immediately to the left of the photograph.

the owner, speculates may be from one of the former ecclesiastical establishments around Grimsby dissolved and confiscated in the Henrician Reformation (cf. Loughlin and Miller 1979, 229), some of the stone of which was evidently used in the Church of St Mary at Hatcliffe village. This mill may then have had a manorial attachment. Waterdell may be one of the locations of the two mills recorded at Hatcliffe in the Domesday Book for there seems to have been a building at Waterdell at that time. An Elizabethan sixpence dating to 1576 was found by Graham Collins in the garden at the Waterdell mill site (pers. comm. Graham Collins).

This mill is now disused but was a watermill powered via a created millstream channel (a race or leat) diverted from the Waithe east of Hatcliffe and managed by sluice gates. There was a footbridge over the race between the paddocks specified on the 1880s map, and a sluice on the race further up-stream near the north-west corner of Quarry Field, formerly known as Little Beck Field, as per the 1841 Tithe map. The millstream is clearly defined on the 1841 Tithe map and survives as a partially overgrown dry u-shaped channel that

was presumably clay lined. That record of 1841 notes that the mill at Waterdell and its garden was owned by James Simmonds, with the occupier being John Davey. White's Lincolnshire inventory of 1856 also records John Davey as a corn miller (White 1969). Corn mills played a vital role in society and doubtless this mill was an important element in the rural economy in the 19th century. The Ordnance Survey map from the 1960s shows the mill as 'disused'. In 1986 the mill was listed as Grade II (English Heritage building ID 164388) and its extant remains are documented (www.britishlistedbuildings.co.uk/en-164388-hatcliffe-mill-hatcliffe) [Accessed 22.6.2016]. A well-preserved windmill at nearby Waltham, on the Middle Marsh south of Barnoldby le Beck, is open to the public and there is an associated museum.

An extensive linear chalk quarry had been opened at Waterdell, cut into the north side of the valley. This shows on the 1880s OS map. It was filled in with rubble and landscaped around the year 2000 when new houses were built at Waterdell; it was then planted with trees (pers. comm. David Huggett and Graham Collins both of Waterdell).

2.3.5 The Waithe through the Marshland

On exiting the Wolds the beck turns round c. 90° at Barnoldby le Beck Park, opposite Barnoldby le Beck Manor House, to flow south-eastwards, and then east, as it begins its journey across the Middle Marsh to the Outmarsh, a distance of c. 13km. It therefore bypasses Barnoldby le Beck village. The settlement is listed as *Bernulfbi* in the Domesday Book, which was then a large village, with this name meaning, according to Cameron, Bernulf's farmstead or village, while the earliest record of '*upon Becke*' is in the mid-17th century (Cameron 1998, 10). The present Manor House appears to date from the 18th century. The Middle Marsh is an area of low lying, gently undulating, land, blanketed with glacial till, and often referred to as 'The Clays'. Much of this land is good for agriculture. The first kilometre of this section of its course on leaving the Wolds was through parkland in the 19th century (Barnoldby le Beck Park) and a map from that period (the 1880s) shows the beck to follow initially a canalized channel (opposite Corner Field) before reaching some complicated micro-meanders which are still extant. Several items have been reported to the Portable Antiquities Scheme from the parkland hereabouts, being Roman and post-Roman except for part of an Iron Age coin thought to be a Corieltavian type (NLM-26F023). More recently the west bank has been cultivated for arable crops and currently is being used to raise Christmas trees (see Section 3.6.4 below). This cropping choice may have been influenced by the nature of the soils at this point with a high gravel and stone content, a remnant of the glaciations and the detritus of the slip-way in the periglacial period (cf. Section 1.2.3); another such plantation occurs in a similar position further south (to the south of Louth). Being adjacent to Corner Field, the focus of this report, it is not surprising that several Roman finds have been reported to the PAS from this field, including four Roman coins and a Crossbow brooch (see Chapter 11). From the area of extant parkland on the north bank has come a jet/shale ring of Roman attribution and an umbonate brooch.

Generally the Marshland is intensively cultivated arable land, with both grain and root crops on its Devensian and, near the coast, alluvial, marine and freshwater silt and sandy soils, much of it reclaimed land. This geology and soil combination is broadly uncondusive to cropmark generation, except in isolated areas of sands and gravels (Jones 1988, 10; see below, this Section). Medieval and post-Medieval

saltern evidence is more readily detected from the air by the coast (Jones 1988, 13), however, that is because such activity largely overlies the silting, alluviation and reclamation, under which will lie buried past landscapes, hardly known but of likely rich potential (Ellis *et al.* 2001).

Some 2.5km after leaving the Wolds the Waithe Beck passes through the hamlet (now village) of Brigsley. A settlement here is recorded in the Domesday Book as *Brigeslai* meaning according to Cameron 'the wood, the glade of or by the bridge' (Cameron 1998, 21). St. Helen's Church at Brigsley is Norman in origin (cf. Mee 1992, 68). There are extensive areas of rigg and furrow around the village (Loughlin and Miller 1979, 165). East of Brigsley the rigg and furrow continues as the Waithe follows a slightly meandering course though sections have been straightened. Here the beck passes the parish of Ashby cum Fenby on its southern bank before arriving in the parish of Waithe. South of the village of Ashby cum Fenby the DMV of Fenby is recorded beyond South Farm at c. TF 259 994/6 with Roman and Medieval features and deposits documented (NELM Accession 2003-2). The settlement at Ashby cum Fenby is recorded in the Domesday Book, the name meaning the farm or village by the fen according to Cameron (Loughlin and Miller 1979, 164; Cameron 1998, 43).. There is a Pastscape/ Archaeological Data Service record of a Neolithic flint axe from "Waithe gravel pit. Last recorded as part of the Haigh Collection" attributed to the parish of Waithe although the map and grid reference suggest this could be from the pit by Thoroughfare Lane on the south side of Ashby cum Fenby (title Id=1189165).

Immediately east of Ashby cum Fenby a Colchester Derivative brooch of early Roman date is reported via the PAS (NLM-5370FC), while a little further east near the south bank of the Waithe a Late Roman brooch is recorded (NLM-030BB5). On the north bank, just east of Brigsley, south of Waithe Lane, a concentration of finds indicates a centre of activity, probably a settlement. Here surface detection and recovery in recent years has produced sherds of samian ware, a mortarium sherd, three Roman coins, three rings, a bracelet, a pair of tweezers and at least one steelyard, together with five brooches dating collectively to the period c. AD 40-200, including a Dragonisque type (NLM-316E17).

The beck takes its proper name from the settlement and parish at Waithe on the Middle Marsh by which it next passes. Colloquially it is known by very place-specific names as it passes through different localities such as 'Hatcliffe Beck'

at Hatcliffe. Waithe gives its name to the beck and a parish, within which it occupies a central location. Waithe is recorded as *Wade* in the Domesday Book (1086, 1194), with the 'd' being replaced by 'th' by the late 12th century. Both Cameron and Coates are agreed that Wade means 'a ford' though they reach the conclusion by different means (Cameron 1998, 133; Coates 2009, 88), and there has been a ford across the Waithe at Waithe till present times. As Sawyer points out such information can be used to help map early routes through the landscape (Sawyer 1998, 18). Today this linear parish is bisected by the A16 which passes across the Waithe Beck north of Waithe. The modern road follows an historically important route and previously this was a turnpike road (Russell and Russell 1983, 107); Toll Bar Farm, New Waltham, some 4km north of Waithe, records this aspect of the history of the road. The church of St Martin at Waithe was rebuilt in the mid-Victorian period but was once a small cross form church with tower of late Saxon (10th century) origin (Cox 1916, 330; Mee 1992, 404). Waithe was a larger settlement in the Medieval and Early Modern era with occupation attested in the areas that are now fields to the north and south of the church and so it can be categorized as a deserted medieval village (cf. *Lincs to the Past* website 'Waithe Deserted Medieval Village'). The parish was subject to Enclosure between 1807 and 1811 (cf. Section 2.2.5). A watermill at Waithe Mill lies just beyond the parish boundary (in Holton Le Clay parish) on its north side. Dated to 1813, this watermill was fed via a leat from the Waithe Beck and is now a Grade II listed building (English Heritage Building ID 195333); some interior fittings remain extant. The date of the building coincides with the era of widespread enclosures, investment in land improvement and agricultural productivity in east Lincolnshire (cf. Rawding 2001).

A few hundred metres to the east of Waithe Mill the Waithe beck was crossed by the Grimsby to Louth railway line, now disused. Not far from this railway line, to the south, in North Thoresby parish (c. TF 305 990) a Neolithic polished axe-head (Fig. 2.8) was discovered on the surface of a ploughed field by Mr Cliff Spencer. The discovery was made in the 1970s when Mr Spencer was conducting his duties as an agronomist. Mr Spencer kindly loaned the artefact for study, photographing and reporting. The axe is fashioned from fine grained stone, off-white with some areas of brown iron staining. On one side the polishing shows natural banding in the grain creating an 'eye' to one side near the butt end; this side has a marginally rougher feel. All told, it is extremely smooth. It is comparatively squat

and measures 114mm in length, being 27.5mm at its thickest point. The broad blade end is intact and angled, measuring 53mm across with curved ends. The angled cutting edge seems well-used and is most likely an intentional original feature rather than being the consequence of wear, and probably means it will have been hafted in a certain manner (pers. comm. Geoff Halliwell). The axe tapers symmetrically, with a sub-oval section, and extremely smooth flat flanking sides, to its narrow butt-blade terminal, c. 27mm across. The latter shows old damage via a number of impacts, but at its least damaged point is not far from the original terminal. Weight 202g. A somewhat larger polished axe-head in what may be a similar stone, described as "creamy white", was discovered in the parish of Waddingham (on the west side of the Clay Vale, east of Ermine Street) and is now held in North Lincolnshire Museum, Scunthorpe (Whitwell 1967, 33).

Recent survey and excavation by Wessex Archaeology has examined the transect of the Hornsea Offshore Wind Farm cable from the coast at North Coates to Stallingborough, as a mitigation exercise. Amongst several sites investigated is one between Holton le Clay and Waithe (SPE1) with dense Romano-British features, mainly ditches, and a site in Tetney parish (SPE7) of Iron Age and especially Romano-British date, with several sub-phases. Analysis, however, is so far only at the (fieldwork) Completion Statement level (pers. comm. Milica Rajic).

Beyond Waithe Mill the beck continues a further two kilometres before being absorbed by the Tetney Land Drain just west of Tetney. Tetney occupies a rise to the north of the Tetney Land Drain, with marshy land around and in Old English was known as *Tatenaya* and similar, meaning, according to Cameron, 'Taete's island of land' (Cameron 1998, 124). Tetney church is at least Norman in origin but with a 15th century tower of Yorkshire stone; Mee suggests the possibility of a Saxon origin (1992, 386). Ploughing had, in 1945, disturbed an urn containing a large hoard of Late Saxon silver coins (Lincs HER 41227; Mee 1992, 386; Ellis *et al.* 2001, 121). Early and Late Saxon pottery is recorded from north of the church (Lincs HER 42864 and 42865).

The large parish of Tetney was subject to Enclosure between 1774 and 1779 resulting in a fundamental series of changes which saw c. 4000 acres of 'open' land enclosed (Russell and Russell 1983, 96-100). Here, as elsewhere, Russell and Russell note that "The purpose ... was to abolish common rights, subdivide the open lands amongst individual owners of lands



Fig. 2.8 The stone axe-head from near North Thoresby found in the 1970s by Mr Spencer.

and common rights and to hedge and fence these new divisions, to abolish tithes (by allotting lands in lieu thereof); to replace the traditional Open-Field system of agriculture by the type of farming with which we are familiar today. Whilst these decisive changes were being carried out new public and private roads were laid out, many new drains were dug and new sea banks were built” (1983, 98). The meandering old water course of the beck and the new drainage canals can be seen in the pre and post-Enclosure maps (Russell and Russell 1983, 97 and 99). East of Tetney the canalized drain now carrying the water from the Waithe is designated the Tetney Drain. The latter joins the Louth Navigation Canal, completed in 1763, at Tetney Lock before issuing into the North

Sea at Tetney Haven. Mee records the “sea bank”, still visible here, as Roman (1992, 387) though that assertion requires verification as most sea banking in this area dates to the Early Modern era (cf. Grady 1998) with substantive coastal remodelling likely since Roman times (cf. Oliver 2006). Many hoof prints of cattle, perhaps associated with Romano-British greyware from the same location, have been recorded in the estuarine sands and muds and peat formation to the north of the Haven, by Humberston Fitties, in recent years (pers. comm David Robinson, July 2017; Peter Taylor, September 2018). This may represent grazing on salt marsh or shore-side meadows in the Roman period prior to sea level rise in the Late Roman era.

This area of the Outmarsh flanking the North Sea hereabouts still has something of a marine and estuarine character, and prior to drainage and concerted land reclamation was boggy and traversed by tidal creeks. During Iron Age and Roman times, if not before, colonization of areas of alluvium and higher land for arable farming, with grazing land readily close-by, is likely, as suggested by earlier chance finds in the Cleethorpes and Humberston areas (Loughlin and Miller 1979, 165-7). Use of this land-sea margin-scape in later prehistory is established by discoveries such as the salt working site of Bronze Age-Early Iron Age date at Newton Marsh Lane, Tetney (Lincs HER 43081; Palmer-Brown 1993) as well as lithics (see Chapter 5) and occasional metal artefacts. There is growing evidence of Roman occupation and exploitation of the Middle Marsh and Outmarsh (cf. Ellis *et al.* 2001, 249-53, fig. 11.4). For instance, north of Station Road, between Waithe and Tetney, Roman pottery has been found (Lincs HER 42933 and 42934); from Tetney Roman greyware pottery, sherds of samian and oyster shell are recorded (Marjoram 1973, 40; Lincs HER 41225; see also Chapman 2001, fig. 8.4); in addition a Roman coin hoard (25 bronze coins) was found near North Thoresby (Lincs HER 41204). Further Roman period finds are also known to the south, in the area of Saltfootby (Precious *nd*) and around Alvingham and Acre Bridge (Jones 1988, 15; Bush forthcoming). However, contextual details are often lacking, precluding judgement on the significance of what are generally chance finds. Use of the Marshland at this time would have been facilitated by the fact that the Roman era saw comparatively dry conditions and a fall in sea levels. This would have assisted colonization and seasonal use of this lower lying land on the eastern side of the Wolds (and elsewhere in Lincolnshire), particularly in the Late Roman period, as evidenced by the dates of the Roman pottery and coins recovered (cf. Leahy 2007b, 17). It is likely that salt manufacture was a significant activity and it is possible that a proportion of sites were seasonal. Much more concerted research is required in the Middle Marsh and Outmarsh in order to understand this use. Certainly to the east and south-east of Tetney relic saltern mounds attest to the importance of the salt manufacture in the Outmarsh during the Medieval and Post-Medieval periods (Grady 1998; cf. Sawyer 1998, 15; Ellis *et al.* 2001, 120-9; Oliver 2006, 20).

2.4 The Ecology of the Waithe Beck and Valley in Recent Years

The Waithe Beck, along with its tributaries, is fast flowing through the Wolds. Dependent on specific locational circumstances it can be variously shallow or deeper in places, clear or choked with watercress and water-weed; by Binbrook it is between c. 1.5 and 2.5 metres broad (Tyszkla 2000, 4). The beck, as with other Wolds streams, was subject to local redirection, canalisation and deepening through land improvement measures at various times in the past. The aim was to assist drainage and regularize fields. There was a particular drive to this end in the decades from 1940 with increased mechanisation but the process had been underway for centuries. More recently there has been a policy to preserve natural courses and to restore old courses in selected locations, or otherwise reintroduce meanders. This is in order to create more natural flows of faster and slack water, with cutting back of over-shading shrubs and trees, and a subsequent improvement of associated micro-environments and possibilities for biodiversity (Smith 2009, 110). The Wolds Chalk Stream Project is now a well-established restoration and management initiative with a number of stretches returned to a more naturalistic state (e.g. Allen 2003; Lincolnshire Wolds Countryside Service 2016).

The Waithe Beck had been subject to straightening along the c. 2.5km of its course between Hatcliffe village and Waterdell; this had been an ongoing process, being discernible from the 1841 Tithe map. West of Waterdell, near to the site reported here, it was intended in 2014-5 to restore the natural meanders of the old course, some of which are suggested to be still visible as extant features across the valley floor. This proved not to be possible due to existing infrastructure (buried pipes). Nevertheless it was possible to introduce measures that have improved stream flow and created new gravel exposures and shallows, with, already, a noted wildlife dividend (Lincolnshire Wolds Countryside Service 2016, 15). Desilting and the management of overgrowth has recently been completed in an improvement on the Thoresway Beck (Lincolnshire Wolds Countryside Service 2016, 16).

In terms of wildlife the Waithe contains fish and the valley is a habitat frequented by a variety of mammals, reptiles and birds. The banks of the course have in many places a margin of natural vegetation, though this can be quite narrow. Small brown trout, dace, chub, stone loach and brook lamprey occur in the chalk streams of the Wolds, with grayling in the Great Eau/Calceby Beck (Lincolnshire Wolds Countryside



Fig. 2.9 September flora by the Waithe.

Service 2016, 16); sticklebacks and brown trout occur in the Waithe Beck (Tyszka 2000, 4). Freshwater molluscs occur in the Waithe Beck by Hatcliffe Top (pers. comm. Roger Stephenson). Kingfishers breed along the Bain and Nettleton becks and also the Waithe Beck (Lincolnshire Wolds Countryside Service 2016, 16; pers. comm. Gwen and Walter Bain and Rachel Kloosterboer). Smith notes that otters are now re-established on the Bain and Lymn Becks (Smith 2009, 109), and they are now present too on the Waithe Beck at certain locations. The skeleton of an otter was recently recovered at site S10 near Sibsey (in the Fens), in a deposit of Late Roman date, during works in advance of the Covington to Boston pipeline (Bush forthcoming). The Wolds are known for hares and black rabbits, alongside more common russet coloured rabbits; black rabbits were a farmed type that has naturalised through ‘escapes’. Such rabbits are occasionally seen at Hatcliffe Top. In the early 20th century Cox noted that in Lincolnshire “pine-marten and the polecat are said to linger on” (Cox 1916, 16). Graham Collins of Waterdell (pers. comm.) has seen a polecat in the valley area recently, while otters have been present in the valley between Hatcliffe village and Waterdell during the past decade. Populations of water

voles are thriving in various locations along the Waithe and can be seen at other stream courses in the area (pers. comm. Walter Bain). Frequent trace evidence for a non-native introduction, namely muntjac deer, is encountered at Hatcliffe Top and these animals are now often sighted on The Wolds. Red deer are also occasionally seen. Little owl, long-eared owl and the barn owl are types known in the valley around the site, as are pipistrelle and brown long-eared bats, and Corner Field and the immediate area see migrating birds flocking, resting and feeding, such as pink-footed geese. Trees common to the Wolds include oak, ash and elder, plus sycamore, with alder, crack and grey willow to be found by the becks; beech trees are quite frequent on the Wolds, having often been planted in groups, creating striking profiles when silhouetted against the sky, but they are a comparative ‘new-comer’ to the Wolds. Concern over wildlife depletion and pressure and loss of native species through demands on the land has led to constructive Countryside Stewardship arrangements in partnerships between Natural England and landowners and farmers, but also initiatives in planting trees and installing nesting boxes, etc. Project team member Alan Daws has been a leader in such action for more than two decades.

2.5 The Developing Anthropogenic Landscape of the Waithe Valley: A Summary and Prospect

Steven Willis and Jon Daw

Surface geology, soils and morphology have been major factors shaping the human activities in and around the Waithe valley. Following the last Ice Age c. 10,000 BC Mesolithic people doubtless followed the developing seasonal movement of animals across the former land-bridge that is now the North Sea basin and into the valley. Rising sea levels by the end of the Mesolithic forced people to migrate from the area we now call Doggerland (Coles 1998; Gaffney *et al.* 2009). The absence to date of recognised settlement sites in the earlier prehistoric period (Mesolithic to Bronze Age) in the valley means that it is not possible to know what the balance was between sacred and burial landscapes and the 'houses for the living'. To suggest for this period of prehistory local agriculture, reliance has to be placed on the pollen, molluscs and animal bones from the work by Phillips *et al.* in their survey of the 1980s, indicating major tree clearance from the earlier Neolithic, at least in the area of the Waithe valley mid-course through the Wolds (Phillips 1989a; 1989b). Funerary monuments, as noted above, are more apparent and by the Bronze Age round barrows are relatively numerous on the Wolds compared with other Lincolnshire landforms, firmly suggestive of substantive population and the creation and maintenance of sacred landscapes (Fig. 2.10). These, however, are likely to be only the most visibly surviving traces of a comparatively intense use of the valley from the early Neolithic if not before, judging from the lithics gathered by the Sheffield survey (Phillips 1989b), the growing worked flint assemblage gathered to date from the present fieldwork at Brookenby (Willis forthcoming b) and the major palisaded features confirmed at the Nettleton/Rothwell Mount Pleasant site (Willis 2013). By the Iron Age evidence is more elusive as only four sites are ascribed to the period according to the HER listings and the Roman sites investigated as part of the Central Wolds Research Project have only produced traces of Iron Age precursors in two cases. Within the total HER listing a temporal spread is assigned to over a quarter of the monuments recorded in the Waithe valley adding to this narrative some further difficulty, though that date-range ascription is wise given the reliance upon

crop and soilmarks from aerial records where the story of what is actually present lies beneath the busy ploughsoils. The record for the Roman period is by contrast surprisingly lengthy, especially in the area between the western Wolds ridge and Swinhope, suggesting a high population heavily engaged in agricultural pursuits with a variety of site types represented (a developed settlement and economic system). This may have resulted in land exhaustion; either way there are pointers to the likelihood of major changes to the organization and settlement of the landscape in the Late Roman period. These themes and others are considered at greater length in the Discussion chapter (Chapter 11). The burial record for this period is virtually non-existent, though Roman period burials are known at Ludford and Late Roman/Saxon burials occur outside the walls of Roman Caistor (Willis 2013, 1.9.1). Yet, again, with the Anglo Saxon and Norse era, settlement evidence lacks for certainty, with an absence of Norse sites in the monument record.

Agriculture on Wolds soils especially suited to barley and oats has clearly been important according to the historical record from the Norman Conquest, with sheep raising of special importance through following periods. Whether cereal production dominated agricultural production from the Roman period (and before) is an important question, one which this volume and the wider Project aims to shed light on. The intensive use of the Wolds for agricultural production in the Roman era fits well with and complements the iron working, pottery manufacture and quern industries known and suspected along the sandy western edge of the Clay Vale below the Wolds (cf. Jones 1988).

The valley's settlement pattern has grown and shrunk largely (but not exclusively) in tune with its agriculture. The prominence of sheep shown in documentary records in 1301 and exactly five hundred years later in 1801 is not a surprise, whereas the rise and fall of arable productivity between High Middle Ages estates and 18th century rabbit warrens might be less expected (Platts 1985; Thirsk 1957; Rawding 2001). Agriculture promoted and enriched lives and well-being and arguably can be seen to move hand in hand with religious and ceremonial expression. The emphasis on the ceremonial/funerary/sacred landscape on the Wold tops from the beginning of monument construction until the Iron Age is mirrored by the decoration and architectural elaboration (often rebuilding) put into parish churches later. It is between the prehistoric and the truly historic that the record for the Waithe valley is at its most obscure. That

said there is tremendous scope for exploring the archaeology of burials and ceremonial monuments of the Neolithic and Bronze Ages and there is a pressing need to search for settlement remains. As is implicit from the above, all periods will benefit from concerted palaeoenvironmental studies looking at past vegetation, clearance, ecology, land use, sedimentation, etc. via coring and dating the pollen and molluscan assemblages they yield. Adjacent areas have seen some specific projects focused in this manner such as the Witham Valley Research Project of c. 15 years ago and, a little before that,

the Humber Wetlands Survey. Excavation and integrated surface survey such as that undertaken by this Project has aimed to address these issues, but otherwise there is little research or contract archaeology undertaken on the Wolds (which is an enduring obstacle to learning and understanding). Hence the aim has been to fill the gaps with firm evidence, hidden in and below these agriculturally enabling soils. As discovery replaces the absence of information, and speculation it gives rise to, the story of the valley's development will be amended in ways not yet apparent.

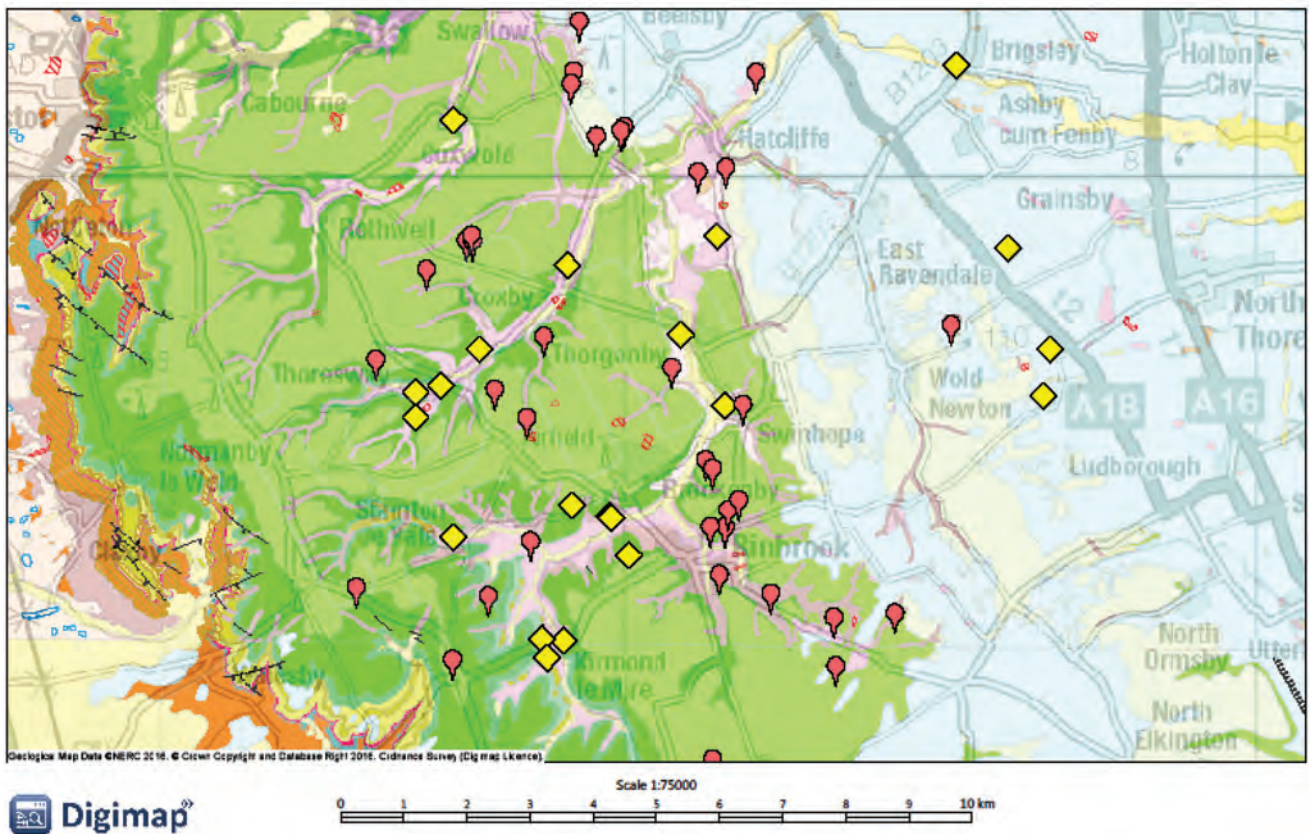


Fig. 2.10 Episodes in the human use of the Waithe catchment. Red balloons denote likely Bronze Age round barrows, while yellow diamonds mark former medieval settlement (DMVs); background colours represent geology. (Prepared using data that is © Crown Copyright/database right 2011; an Ordnance Survey/Edina supplied service)

Chapter 3

Investigative Survey at Hatcliffe Top, 2005-2016

Steven Willis

with a contribution by David Robinson and Colin Coates

3.1 The Physical Character of Hatcliffe Top

3.1.1 The Location

Hatcliffe Top lies in North East Lincolnshire on the south side of the Waithe valley as the Waithe beck passes north-eastward through the incised channel to Waterdell. The solid geology at Hatcliffe Top is Burnham Chalk overlain by glacial till, with the soil designated as the category “Slightly acid loamy and clayey soils with impeded drainage” and the land classified as Grade 2 (cf. Chapter One; soil classification via the Cranfield www.landis.org.uk/soilscapes/ viewed 12/12/17). This location (TA 229 021), at the eastern edge of the Lincolnshire Wolds, overlooks the low lying Marshland. As its name implies it is an area of higher land, rising nearly 35m (from 25m OD at the Waithe beck to the east) to c. 58m OD around Hatcliffe Top farm buildings, though its steepest sides plateau off from around 50m OD (cf. Fig. 3.1). From this plateau the topography dips significantly to the north (to the Waithe valley) and to the east to the Marshland, while to the west it is defined by the tributary valley running past East and West Ravendale to Hatcliffe Planation valley, and the small valley with a seasonal minor stream, which runs westwards through the field known as James Garth, being an altered tributary of the Waithe beck, west of Old Farm (Fig. 3.1). To the south the high ground continues such that Hatcliffe Top is essentially the end point of a spur of high land projecting north from Ravendale Top and the area to its south (over 70m OD). In many respects the topography at this location is typical of many parts of the Lincolnshire Wolds, although significance lies in the fact that this location lies by a point of natural change, and the entrance/exit

way from one type of landscape and environment to another.

The site forming the main focus of the archaeological works at Hatcliffe Top lies mainly within the modern field known as Corner Field at the north-east tip of Hatcliffe Top. This field is bounded by the A18 Barton Street to the immediate east, the road connecting Hatcliffe village to the A18 to the north (the so-called Hatcliffe Road), Stable Field to the south and a post Second World War ‘Long Plantation’ to the west and further south-west beyond the plantation, Home Field+. Both Stable Field and Home Field+ were under arable cultivation during the time of the present Project. The 1841 Tithe map for the Parish of Hatcliffe records the present ‘Corner Field’ as ‘Home Walk’ owned then by the Rev. Thomas Walker and farmed by Richard Williams, being then, as today, under arable. Reference to the Tithe and Ordnance Survey maps confirms that there has been strong continuity in the arrangement of the landscape over the past 170 years with field divisions and access ways remaining largely unaltered; one of the few changes has been the amalgamation of three fields into one very large field (Home Field+; cf. Section 3.6.2).

Barton Street has conventionally been thought to be an ancient and Roman routeway, facilitating north-south movement along the eastern skirt of the Wolds, placed so as to avoid lowlands subject to flooding and the undulations of the Wolds (cf. Whitwell 1982, 158, fig. 8; Bennett 1999, fig. 12). The road from Barton Street to Hatcliffe village, some 2.25kms to west follows the southern side of the Waithe valley rising up to the higher land on the northern fringe of Hatcliffe Top to avoid the narrow flood plan of the Waithe and to reach the relative plateau avoiding the steep valley side. Human access into and from the Wolds following the course of the beck in the past might be presumed, although the modern road need not necessarily overlie an older course or courses.

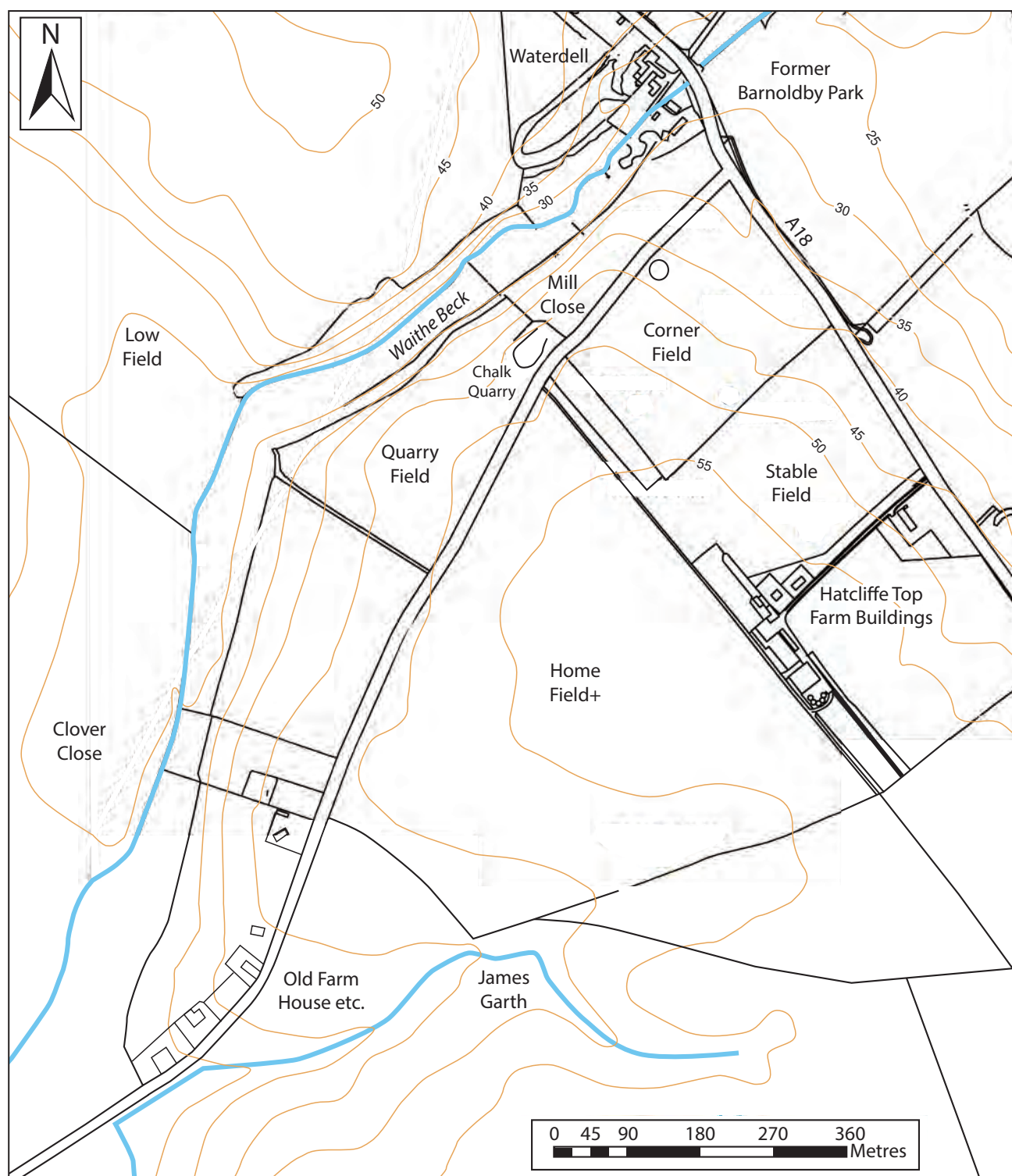


Fig. 3.1 Hatcliffe Top area plan with Field names and Old Farm etc.



Fig. 3.2 Looking north-east from beside the former chalk quarry in Corner Field as the land dips away to the Waithe as it leaves the Wolds. Barnoldby le Beck is in the distance.

3.1.2 The Chalk Quarries in Corner Field and by Mill Close

A small but comparatively deep abandoned chalk quarry occurs just into Corner Field at a mid-point along its north edge. Roughly circular in plan and of bowl shaped form it measures approximately 27m in diameter and is c. 6.5m deep. It was accessed from the east, being cut back, from what was moderately sloping land on this eastern side, into the natural step in the field, which would have been a convenient ‘working-face’. The interior is dished and slightly lower than the level of the entrance threshold. Doubtless this location was selected as it was marginal to the field and beside the Hatcliffe to Barton Street road for convenient transport. Another open chalk quarry, somewhat larger than that in Corner Field, occurs on the north side of this road, opposite the Long Plantation, at the south-western end of the paddock field known as Mill Close, again alongside the road. This quarry now lies within woodland and itself is colonized with trees and scrub. Earthworks representing a former trackway lead to or pass close by this quarry. The track ascends the steep

valley side from Waterdell to the area of the quarry, near the summit overlooking the Waithe beck.

The quarry in Corner Field is not marked on the 1841 Tithe map for Hatcliffe Parish, which is a very thorough cartographic record. It appears on maps from the 1880s onwards and so must date from the early-middle Victorian period. Similarly, the quarry by Mill Close, north of the road, was in existence by the 1880s, though it too does not feature on the 1841 Tithe map which shows two small plantations in this area. As discussed in the earlier Project volume (Willis 2013, section 1.13) small pits for the extraction of chalk are frequent across the Wolds. Many were located in the centre of fields and have since been filled, often leaving a dished depression, and/or are readily seen in aerial photographs. Others by the margins of fields are not uncommonly still open, as with those mentioned here and another by the east side of the A18, just south of the turning to the Hatcliffe Top Farm and Park House access road (again this quarry was already in existence in the 1880s). A large quarry also existed at Waterdell on the north side of the Waithe (cf. Fig. 1.5). A marked saucer depression in the surface of Corner Field next to the south edge of the field, again at the point

where the slope changes, is potentially a filled former quarry. LiDAR survey shows these types of features particularly clearly and this example is a case in point. Extracted chalk in some cases was employed for local road hard-core or farmyard surfacing and also for lime manufacture, though a frequent use was for spreading on fields as a 'top dressing', to maintain a pH balance by neutralizing acid. With extensive areas of the chalk Wolds blanketed with post-glacial clay (Calcethorpe Till and its variations cf. Section 1.2.2) periodic spreading of chalk ('marling') will have assisted in management of the soil pH balance and will have helped drainage and to break-up what may otherwise be thick and heavy soils (what the former ploughman Roger Stephenson (pers. comm.) describes as "strong land"). Since Corner Field and the adjacent arable fields lie besides significant roads and have attested glacial clay subsoil there is a ready explanation or two as to why there were four or five chalk quarries in the near vicinity before the 20th century. The specific location of the two quarries either side of Hatcliffe road on this eastern edge of the Wolds, at points for convenient working into the chalk, plus those by the A18 opposite Park House and at Waterdell suggests the possibility that the chalk was being extracted for dispersal on fields of the adjacent Marshland with its clay carpet subsoils. Chalk spreading continues on these fields to the present.

The quarry in Corner Field has, as with so many disused but still open quarries on the Lincolnshire Wolds, seen the establishment of characteristic chalk flora within and around. The steep sides and bare or thinly silted rock-faces within offer possibilities for plant growth, though the quarry base has some soil sufficient for a few medium sized trees to grow with light scrub also present growing within the quarry. The quarry bowl is thus shady and comparatively damp, in turn inhibitors to many species. Several bushes and small trees crown the rim while the short margin between the quarry and the field hedge to the north has been left as grassland. Elder and hawthorn grow on the quarry rim, with mature ash trees flourishing in the quarry bowl. The quarry and adjacent grassland margin constituent a micro-refuge for wildlife. The importance of these environments across the modern Wolds landscape has been commonly highlighted in recent years (e.g. Smith 2009, 106).

Some concerted tree planting had occurred elsewhere around Hatcliffe Top during the 1960s. The Long Planation along the western side of Corner Field, between it and the greensward by the track to Hatcliffe Top Farm, is not marked as present in the 1960s map and this tallies with what Mr Stephenson said – that he had planted it in the 1960s. A few trees

are indicated in this area on the 1880s map. The plantation now mainly consists of mature Christmas trees (Norway spruce), plus some elder, hazel, pine and ash and is presently used as cover for game birds. Trees were also planted during this period flanking the drive to Hatcliffe Top Farm from the A18 and on the steep slope on the south side of the Waithe Beck below the quarry west of Mill Close and to the north of what is now Quarry Field as the gradient was too severe for mechanized cultivation.

3.2 Archaeological Finds from Corner Field and area prior to 2005

The presence of ancient finds in Corner Field has been known since items were collected from the late 1950s by the then ploughman Mr Roger Stephenson. As a youth, and for 42 years in total, he worked on the farm and during his early years drove a Grey Ferguson tractor in cultivating the fields at Hatcliffe Top. The ploughing with this machine over 50 years ago probably cut deeper into the soil than any ploughing had done in the past few centuries. Mr Stephenson points out that in those days tractors had no 'cab', were slower and as a driver you were lower and hence nearer to the ground than has been the case with the larger machines of recent decades, and so it was easier to observe the ground surface. This being so it was possible for him to see metal finds in the dark ploughsoil turned by the mouldboard, especially if they had verdigris corrosion. Mr Stephenson made a habit of looking out for such items as he ploughed the north-west corner of the field in particular, as they "all came from the same general area" in Corner Field (pers. comm. September 2015 and March 2016). Hence he accumulated a small collection of piecemeal discoveries by eye, including Roman coins, metalwork and pottery (cf. Sections 7.1, 7.4, 7.14).

It is possible there were earlier discoveries made at the site, for which there is no record. The only document of finds from the site in the 20th century is one sentence contained in 'Archaeological Notes' by Ben Whitwell, in his catalogue of sites and discoveries made in the historic county of Lincolnshire for 1965, reported to the City and County Museum, Lincoln (Whitwell 1966, 47). Whitwell writes that "One piece of samian and third and fourth century grey wares found by Mr M. Fekey in the field adjoining Barton Street were reported by Mr G. Taylor" (1966, 47). The grid reference given is TA 230 020 which is actually on the north-west side of Stable Field rather than locating the known

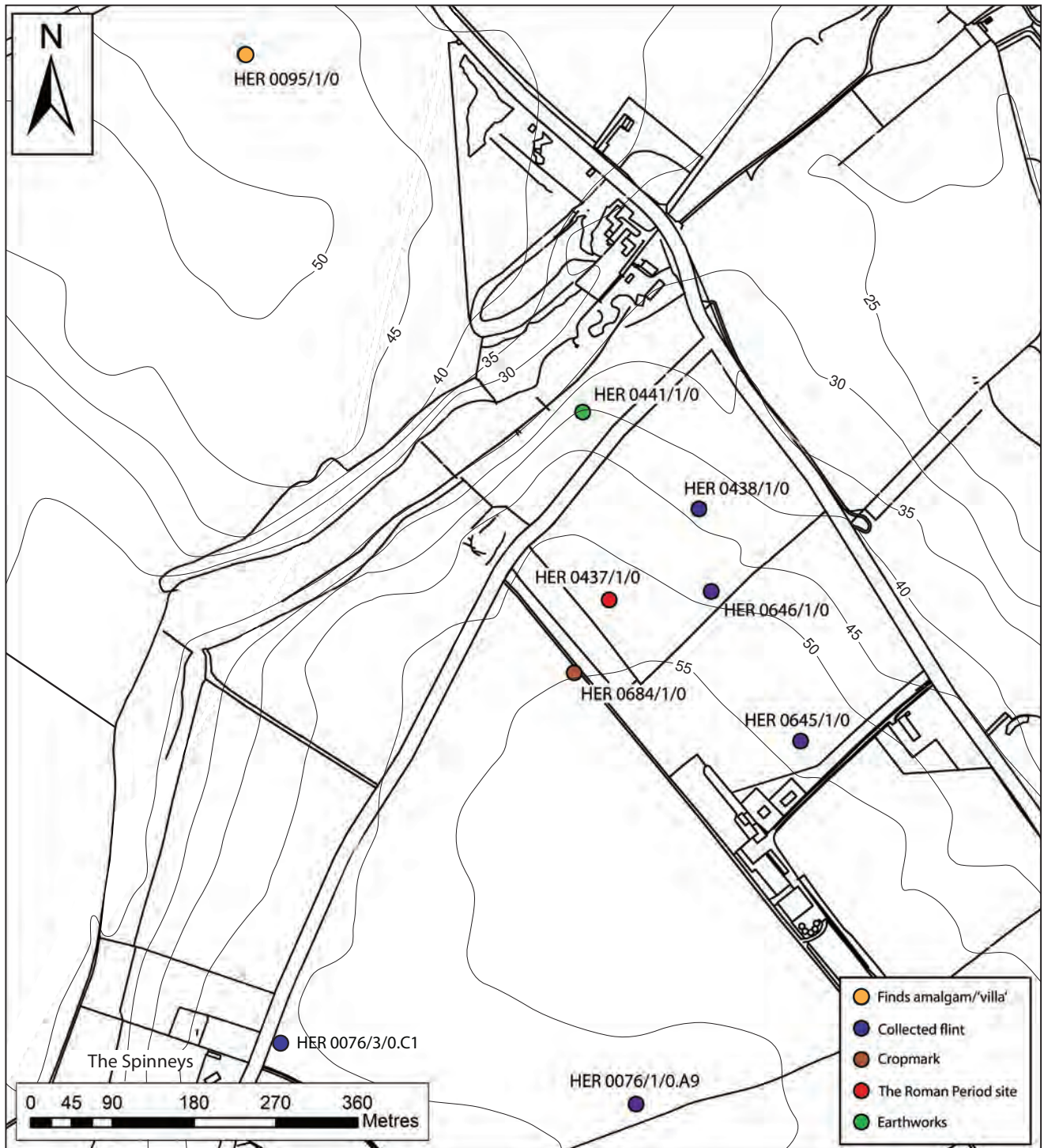


Fig. 3.3 Hatcliffe Top showing the locations of the Historic Environment Records to December 2017.

concentration of evidence reported by Mr Stephenson and in this volume; this may be a function of the map then being used. Mr G. Taylor is presumably Gordon Taylor the locally well-known archaeologist who conducted excavations at the Anglo-Saxon burial site at Welbeck Hill, Irby (see Section 2.2.3). The same grid reference is given by Miller in his 1979 inventory where there is a one sentence entry for the

site (Loughlin and Miller 1979, 166). The latter lists the same range of finds but there is too mention of a “possible conical amphora base, oyster shells and animal bones from fields adjoining Barton Street, 1965”. The source given is “Info. GT 1976”, so again Gordon Taylor of Cleethorpes, though it may be noted that the word ‘fields’ is used. The latter is not an error as evidently items were collected from both

Corner Field and Stable Field. However, there is an error in the additional record in 'Archaeological Notes' from 1966 which states that 277 artefacts from TA 230 022 (a location in the central southern part of Corner Field, were founded by Mr Mike Felcey of Grimsby Archaeological Society (Whitwell 1967, 31); this is presumably the Mr Fekey of the 1966 entry above. This entry (Whitwell 1967, 31) is listed amongst a group of sites yielding flints but in this particular case the wording specifically does not state flints, no descriptions being given. Miller, however, repeats the information but assumes these are flint finds, doubtless given Whitwell's equivocal wording (Loughlin and Miller 1979, 166). Attention to the HER resolves the issue as these finds are listed as "Non Antiquity?" with the notes stating "Mr G Taylor, a local archaeological authority, has examined the flints but could not identify any artefacts" (HER 0438/1/0).

In sum there were clearly Roman items being noticed and collected from the site during the late 1950s and 1960s. These comprised the finds of Mr Fekey and the items gathered by Mr Stephenson. These were separate collections and Mr Stephenson (pers. comm.) did not know of Mr Fekey's activity. He did not report his discoveries to Lincoln Museum as he did not realize their possible significance. Mr Stephenson has kindly made his collection available for study and full reporting in this volume, comprising twenty coins and five metal small finds. The location of Mr Fekey's finds is not known and no further details are available; he is mentioned in the *Lincolnshire History and Archaeology* 'Archaeological Notes' as having made various discoveries in North-East Lincolnshire around this time. Gordon Taylor advised David Robinson in 2016 that he held no finds from Hatcliffe Top. No further information on finds from the site is recorded prior to 2005 although the site was occasionally visited by metal detectorists. The site is recorded (for Roman and later material) as HER entry 0437/1/0.

An undated aerial photograph showed a small part of the archaeological site in Corner Field as a cropmark, specifically curvilinear features in the south-western corner of the field; this seemed to confirm, prior to more concerted work, that there was a site of activity hereabouts with buried features. Around 2004-5 members the North-East Lincolnshire Archaeology and Local History Society and the then County Archaeological Officer, Edward Dickinson, decided the site warranted systematic study.

3.3 The Aims of the Project at Hatcliffe Top and its Development

3.3.1 Project Aims

In the summer of 2007 the North East Lincolnshire Archaeology and Local History Society, with David Robinson their chair, were looking to build upon the work the Society had undertaken at Hatcliffe Top in 2005 (see Section 3.4 below). Following a three way conversation in August that year between the present author, David Robinson and Hugh Winfield, who had replaced Edward Dickinson, it was agreed that the site at Hatcliffe Top warranted more concerted investigation in order to address a number of research questions. Hence it was decided to approach Mr James Walker to ask permission to conduct a programme of work on his farmland at Hatcliffe Top, to which he kindly agreed.

Several factors influenced the approach and the selection of this site for attention. These were formalized in a statement of aims following discussion with Hugh Winfield (Willis and Robinson 2007):

- 1). Recognition that the Lincolnshire Wolds had seen little archaeological investigation.
- 2). A basic aim was to establish more precisely the date and character of the remains through excavation and survey and ascertain the degree of preservation of archaeological deposits below the ploughsoil zone. The work could also gauge how representative the artefact sample from the ploughsoil was compared to any *in situ* remains.
- 3). The site had produced Late Roman (fourth century) pottery which raised the question of how long this Roman presence lasted, especially in the face of coastal raiding and incursion along the North Sea coast at this time. Other areas of England facing the North Sea (Kent and East Anglia) were known to have seen an abandonment of settlements in these potentially vulnerable margins at this time.
- 4). Since the site had produced evidence of both Late Roman and Anglo-Saxon activity there was a prospect that works might shed light on the transition from the Roman to early medieval cultural era, with the need to better comprehend this transition period being widely recognized, nationally.
- 5). Another matter was whether there were traces of prehistoric use of the area, and perhaps later prehistoric origins to the Roman activity at the site, and perhaps continuities, as, evidently, at the Mount Pleasant Nettleton/Rothwell site (Willis 2013); or, was the site newly founded in the Roman era?

6). The position of the site by a natural transit node with a variety of landscape environments close by and the point where four parishes meet suggested that this was a location offering possibilities for human use of resources through all periods. Hence, there was the prospect that recovered remains might shed light on aspects of economy and ecology through various time periods, not just those apparent from the surface collected finds.

7). Excavation could also potentially inform upon the impact of routine modern arable cultivation on the sub-ploughsoil remains in a Wolds context, and thus, by degree, provide some data to inform discussions on this piecemeal, potentially attritional, process.

8). At a general level, in an area where little archaeological detail is known, simply to establish the nature of the surviving evidence was thought a significant step.

9). From the outset it was envisaged that the work at Hatcliffe Top would have student and community participation as a central thread, with the acquisition of skills and training a key aspect of the fieldwork, assisting undergraduates in their degree courses and enhancing the skills of Society members several of whom were studying part-time for degrees in archaeology. Existing opportunities for non-professionals to undertake archaeological fieldwork in this area were few. No fee for attending the fieldwork or for training was to be charged.

The area of the Lincolnshire Wolds and eastern Lincolnshire generally has seen much less development led archaeological fieldwork than other parts of central and eastern England, with few concerted research projects. This means there is much less data available to inform understanding and policy. Compared with other areas there are many conspicuous gaps in knowledge (cf. Taylor 2007; Willis 2006; Start 2018). Hugh Winfield has pointed up the lack of dated lithic items and assemblages from North-East Lincolnshire (pers. comm.; cf. Chapter 11), while pottery expert Ian Rowlandson has emphasized how few assemblages of Roman ceramics and pottery of other periods there are published from the Wolds and the Lincolnshire Marshland south of Grimsby (pers. comm.; cf. Chapter 6). To take an example from the Roman era, the distribution of mortaria made in the Lincoln area in the second century AD mapped by Darling and Precious shows products travelling as far as Chester, Hadrian's Wall and the Antonine Wall but there are contrastingly only three sites in the whole of eastern Lincolnshire with recorded examples (Darling and Precious 2014, fig. 244). Since there were settlement sites across eastern Lincolnshire at this time the recorded distribution cannot be a function of a lack of

occupation; it is difficult to take this map as meaning that there was not an up-take of these vessels, or marketing to sites, in the immediate hinterland of the kilns, especially as it appears there was no, more local, alternative in the area. Rather the map must be actually documenting an absence of archaeological fieldwork and erstwhile concerted studies in eastern Lincolnshire.

As Society member Brian West pointed out in his report on the 2005 fieldwalking finds of the NELALHS from Hatcliffe Top: "Another way of considering the site is in the context of historical maps of the area. A number of maps in *An Historical Atlas of Lincolnshire* (Bennett and Bennett (eds) 2001, figs 3a, b, c, d) fail to show any settlements closer than 10km to the site, apart from Weelsby (Grimsby), until the Domesday survey (fig. 3e) although this may not mean there weren't any" (West 2006, 11).

The value in exploring, and the need to understand, rural society and economy in Britain during the Roman era, where c. 90% of population lived and worked is acknowledged (e.g. Smith *et al.* 2016, 416–17). This is an empire wide quest, and recognized in national and regional research documents in the case of Britain. Papers by, for instance, Monkton and Taylor in *The Archaeology of the East Midlands*, show the need for such studies, not least on the Lincolnshire Wolds (see Cooper 2006). The need for focused study in areas such as the Lincolnshire Wolds is highlighted in the East Midlands Historic Environment Research Strategy (Knight *et al.* 2012, research objective 5.I).

The work at Hatcliffe Top was from the outset conceived of as part of a broader long term project looking at settlement and economy in the area of the central Wolds and in 2007 it was thought likely that work at Hatcliffe Top would help complement the picture emerging from the excavations and fieldwork conducted on the western side of the Wolds south of Caistor and by the western headwaters of the Waithe (Willis 2013). Was there, for instance, a contrast in the economic and cultural activities between these sites? The 2005 data had suggested that the site was later in emphasis than the Mount Pleasant Nettleton/Rothwell site and could span the transition to the post-Roman era. That process of change remains less than well understood, so here potentially was the prospect of addressing the call exemplified by Dobney *et al.* that "For the early 3rd to the 5th c. every opportunity should be taken to obtain a full sequence of biological evidence from a wide range of sites throughout Britain in order to trace the evolution of social and economic processes." (Dobney *et al.* 1999, 32).

The principal aim was to gather data through survey and excavation at Hatcliffe Top which could be viewed in light of the accumulating evidence from the Waithe

valley and adjacent sites, sharing a broadly common environment, and using consistent methodologies. The findings on settlement, economy, diet, cultural expression and so forth might then be compared with the emerging picture from sites of similar date in the Humber Bank/Stallingborough area of North-East Lincolnshire, where several development led excavations have recently taken place, as well as other sites and areas further afield.

3.3.2 The Development of the Fieldwork

Following the initial systematic investigations undertaken by the NELALHS in 2005 there followed four seasons of excavation in Corner Field from 2007, during the month of August, combining undergraduate student training, Society member involvement and local volunteer contributions. Fieldwork needed to occur in August to fit other commitments. Further seasons between 2014 and 2016 were conducted in the autumn months when

the circumstances of the cropping permitted. It was not, of course, possible to conduct excavations and survey work at will, and work at other sites in the area was also being undertaken through this period (and in 2010, 2014, 2015 and 2016 at the same time as work at Hatcliffe Top) as part of the wider Project. The main investigative activities conducted at Hatcliffe Top are documented in Tables 3.1 and 3.2.

3.4 Fieldwalking and Excavation in Corner Field in 2005 by the NELALHS

3.4.1 Introduction

Corner Field was examined by the NELALHS at the outset of the archaeological exploration of the site, in 2005. This was via systematic surface collection, first by line walking followed by intensive collection and then trial excavation.

Table 3.1 Main fieldwork activities at Hatcliffe Top, in Corner Field, 2005-2016

Year/Month	Field Condition	Excavation Trenches	Survey
2005 April	Field fallow	-	Fieldwalking Corner Field
2005 June	Field fallow	NELALHS Trial Trench	-
2007 August	Field ploughed	Trench A	Initial Geophysical survey Metal-detecting survey
2008 August	Standing crop	Trench B Trench C	No survey possible
2009 August	Harvested /stubble	Trench B extended Trench D	No geophysical survey possible Metal-detecting survey
2010 August	Standing crop	Trench C extended Trench E Trench F	No survey possible
2010 September	Harvested/stubble	Trench C extended	No geophysical survey possible Metal-detecting survey
2014 September	Harvested/stubble	Trench C extended	No geophysical survey possible Metal-detecting survey
2015 November	Drilled	Trench C extended	No geophysical survey possible Metal-detecting survey
2016 September	Harvested/stubble	-	Geophysical survey completed
2016 October	Harrowed	-	Metal-detecting survey

Table 3.2 Main fieldwork activities at Hatcliffe Top other than in Corner Field, 2005-2015

Year/Month	Field Condition	Survey
2010 August	Ploughed	Fieldwalking - Home Field+
2015 September	Grass (paddock)	Geophysical survey in Mill Close
2015 September	Grass (meadow)	Geophysical survey over greensward west of Long Plantation
2015 November	Drilled	Fieldwalking - Stable Field

3.4.2 Fieldwalking in Corner Field in 2005 by the NELALHS

An amount of pottery sherds was collected from the surface of Corner Field by NELALHS member Darren Campbell prior to March 2005. A short report on this assemblage was prepared by Anne Boyle of North Lincolnshire Museums, Scunthorpe (Boyle 2005). No

copy is held by the NELALHS, but while full details are not available for the present report summary points are known. This assemblage was dominated by Roman coarse grey wares in a variety of fabrics. The majority of diagnostic pieces were believed to be from jars, while there was a sherd that may be from a spouted jug, and a mortarium rim with white slip (Boyle 2005). Roman fine wares were represented by a single sherd of samian and two of Nene Valley colour

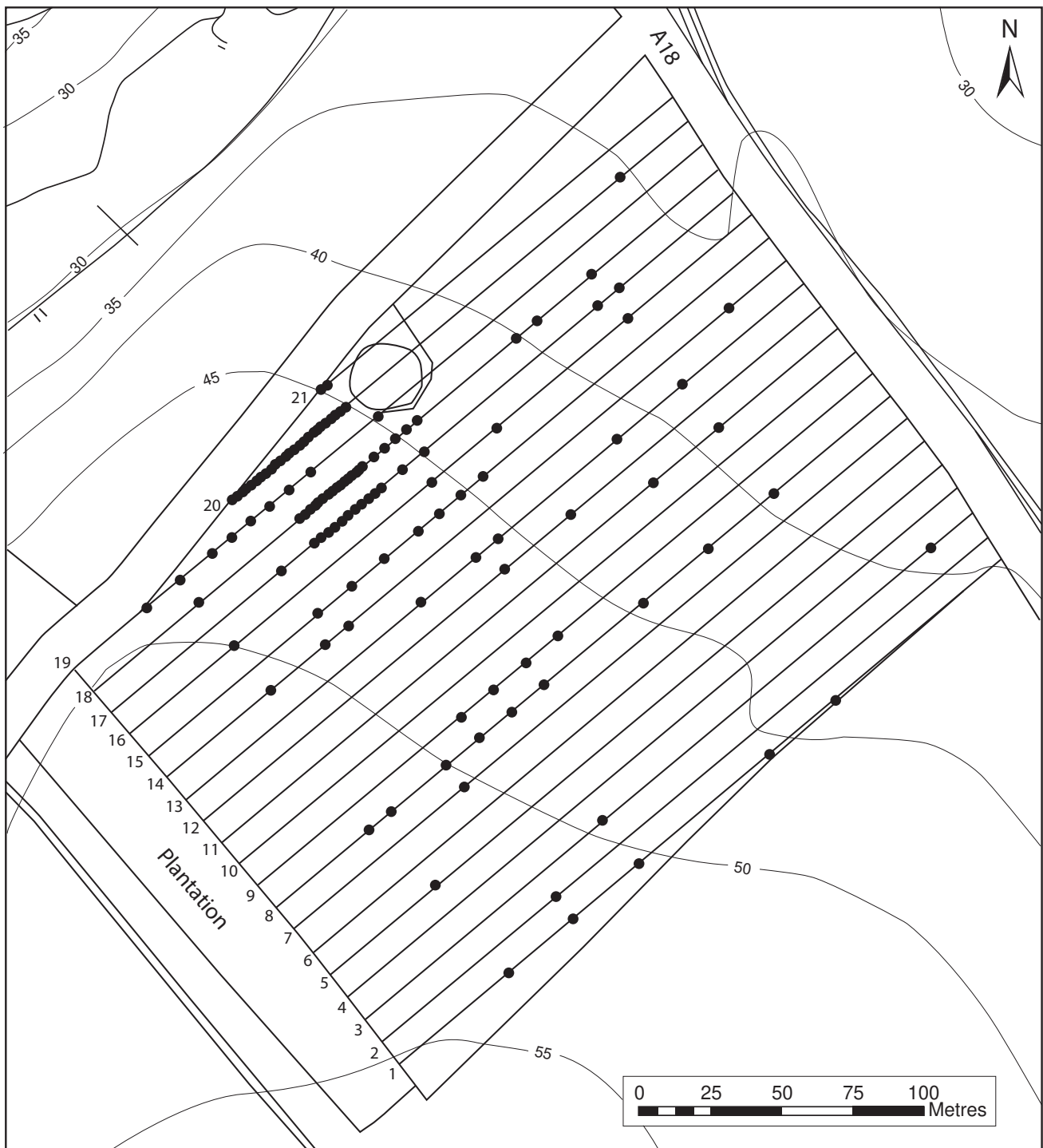


Fig. 3.4 Fieldwalking in Corner Field by the NELALHS in 2005 showing the arrangement of the lines walked and the incidence of Roman pottery finds.

coated ware. Boyle concluded that the assemblage pointed to a 3rd or 4th century date for the site (Boyle 2005). Three “heavily tempered” handmade sherds might, Boyle thought, be Early Saxon, though could be prehistoric, whilst she could be more certain in identifying five shell tempered sherds of Lincoln Kiln Type, indicating some limited activity, in her view, in the Late Saxon era (Boyle 2005). Several medieval pottery items were present, with Boyle observing: “A

background scatter of Local Medieval fabrics, Humber ware and Toynton All Saints ware can probably be explained by medieval manuring practices” (2005). She noted that post-medieval pottery was limited to Blackware, English stoneware, Nottingham Stoneware and Late Humberware (Boyle 2005).

Following this initial informal examination of the site, and the pointers forthcoming from Mr Campbell’s finds, a systematic fieldwalking exercise

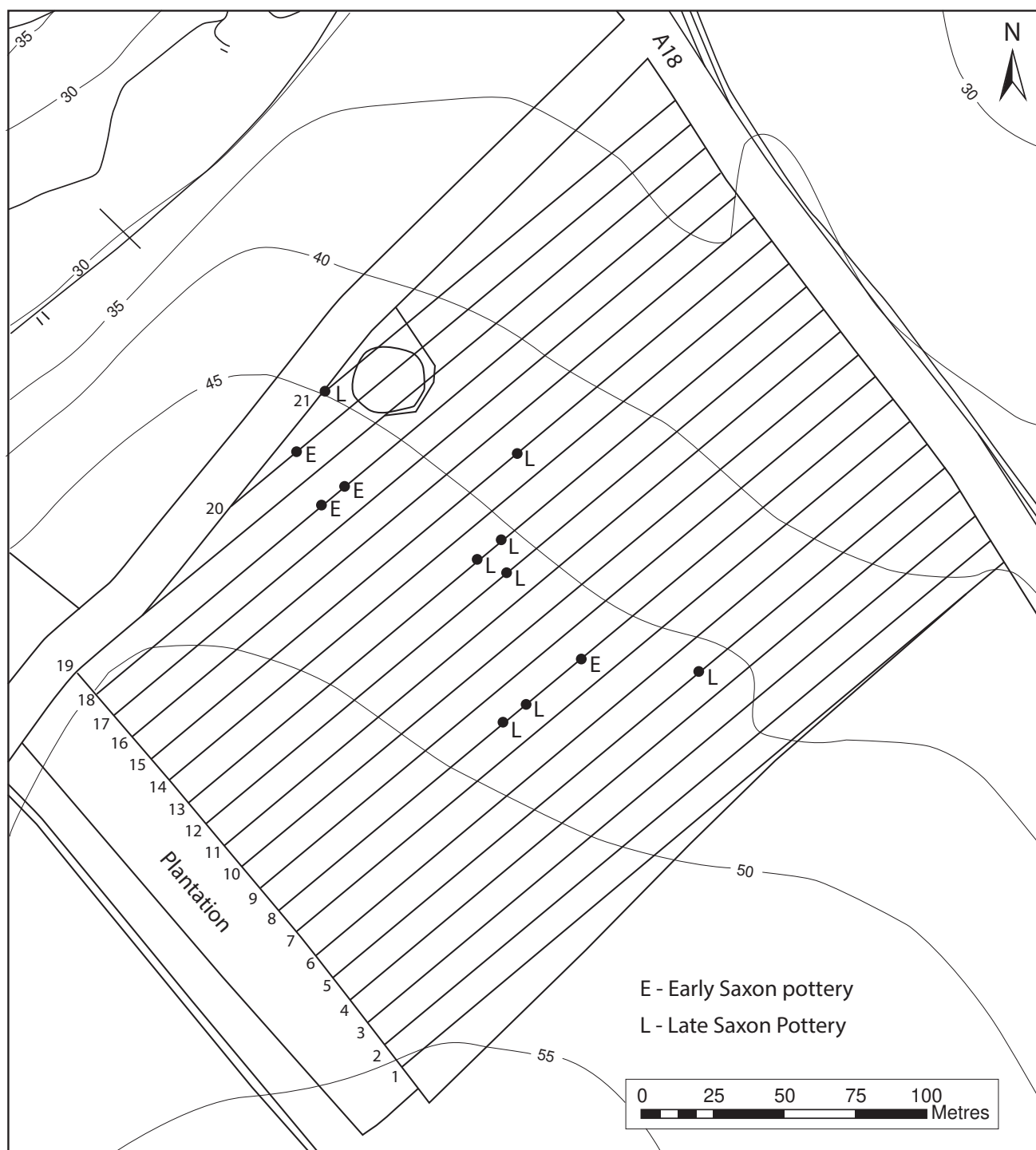


Fig. 3.5 Fieldwalking in Corner Field by the NELALHS in 2005 showing the arrangement of the lines walked and the incidence of Anglo-Saxon pottery finds.

was undertaken by the NELALHS in Corner Field in April 2005. Consistent with policy at this time the field was left fallow through 2005. This was the first organized archaeological examination of the field and marks the start of the investigation of the site as reported in this volume. The exercise took the form of line-walking across the field from south-west to north-east, with walkers spaced 10m apart. The walking began at the south-western edge of the field adjacent

to the Long Plantation and continued to the edge of the field next to the A18. Nineteen complete transect lines and two part lines were walked over a distance (for the complete lines) of c. 280m (Fig. 3.4). The lines were divided into 30m stints with finds collected and bagged per stint. No finds are recorded from the first 30m stint of any line and this is probably explained by the fact that this strip has been cultivated in a different manner to the rest of the field for some years,



Fig. 3.6 Fieldwalking in Corner Field by the NELALHS in 2005 showing the arrangement of the lines walked and the incidence of Medieval pottery finds.

with maize grown to provide game-bird cover, and this often means the strip is inaccessible, or in spring that the area it occupies has remained unploughed, with simply spread flattened maize stalks. Elsewhere standing stubble from the previous year's crop and some weed growth and die-back over autumn and winter partially obscured the ground surface in April 2005. Discounting the first 30m stint for this reason and the part stint at the eastern edge of the field beyond 270m distance from the baseline at Long Plantation a total of 164 stints were walked. Since the exercise was aimed at providing an initial structured indication of what lay within the field and where areas of concentration lay, it was deemed sufficient simply to locate finds to within the 30m stints, and not record their precise spatial occurrence individually; this is a standard practice in such circumstances (cf. Fasham *et al.* 1980, 3-6). At the time of this walking the only known evidence from the site was the appearance of an area of cropmarks in the south-west corner of the field suggestive of curvilinear features (cf. Section 3.2), the record of past surface collected finds in the North East Lincolnshire Sites and Monuments Record (cf. Loughlin and Miller 1979, 166; HER 0437/1/0) together with Mr Campbell's then recent finds, and so a priority was to collect cultural material leading to a better understanding of the date (or dates) of activity and a more precise spatial definition of its incidence. The finds were washed and recorded by Society members and the identifications as reported here are by members, assisted by Anne Boyle and Dr Kevin Leahy. Quantities of pottery recovered are recorded in Table 3.3. The incidence per stint is shown for each cultural period represented in Figures 3.4-3.6. These figures plot the number of finds per stint, and since the exact location of each individual find was not recorded the number per stint is distributed evenly over the distance of each stint, and so the plots therefore constitute a representation of frequency.

Table 3.3 Summary of pottery collected by the NELALHS from Corner Field in 2005 via line-walking.

Cultural Period	Number of sherds collected	Percentage of assemblage
Roman	139	78.5
Early Anglo-Saxon	4	2.3
Later Anglo-Saxon	8	4.5
Medieval	25	14.1
Unattributed	1	0.6
Totals:	177	100

No prehistoric pottery nor lithics were recovered. Of the total of 177 sherds of pottery recovered 139 were Roman, collected from 52 separate stints. Hence Roman items account for almost 80% of the overall pottery assemblage from this exercise (by number of sherds). These sherds were almost exclusively greywares of some description, appearing in largely quartz tempered fabrics, mostly examples of coarse wares of regional and more local origin. These items were found across the field, with, on average, a sherd of Roman pottery being recovered for every 37m walked (discounting the western 30m margin). However, these sherds were mainly found in the north-west quarter of the field, with most stints outside that area with Roman pottery registering only one sherd. Within the area of stints two-five (i.e. between 30 and 150m from the start position) and from Line 13 north 101 Roman sherds were collected (some 73% of the Roman assemblage from the field as a whole); this area was then subject to an intensive collection (see below). The area immediately west and south-west of the former chalk quarry registered markedly high levels of sherds (for this exercise) particularly in Lines 17 and 18 and 20 (immediately adjacent to the field edge). For some reason Line 19 is recorded as having produced few sherds, and it seems improbable that this record reflects the reality of sherd presence in the ploughsoil at this point (Fig. 3.4); the explanation may lie in the walker being inexperienced in sherd recognition, though a significant factor here with stints 2 and 3 at least (between 30 and 90m) may be that these lie close-by the field margin, with Lines 19-21 beginning at staggered points; the recording suggests that more realistically the eight Roman sherds attributed to stint 3 on Line 20 should be split with stint 3 on Line 19, so four sherds are assigned to that stint in Fig. 3.4. Little Roman pottery was found on the southern side of the field (the southern-most 70 metres) though curiously the southern-most line (Line 1) yielded five sherds (a relatively high number for this part of the field). This general fall-off to the south is in turn reflected in the absence of Roman finds from the field to the immediate south (Stable Field) and from the coin distribution in the ploughsoil from Corner Field (Figs 11.10 and 11.11). The seventh and eighth stints (between 180-240m east) produced twelve sherds between Lines 8 and 18 which is a modest tally, but nonetheless greater than the surrounding stints. Whether the latter reflects a genuine indicator of past activity is not clear, partly as some degree of natural and mechanically instigated soil movement from the higher part of the field to the west, with its higher concentrations of sherds, may be an explanation for these finds on the lower eastern part of the field. Lines

1 and 8 have noticeably higher tallies of Roman sherds and Line 8 produced a quarter of the Anglo-Saxon sherds; could the explanation for these higher numbers of collected items lie in the fact that assiduous experienced walkers strode this lines?

Amongst this assemblage a small number of Anglo-Saxon sherds were identified by Ann Boyle. It was not known at the time but this is consistent with the other indicators of activity of that period in the area of the field. All of these Anglo-Saxon sherds came from a band across the site (between 90 and 180m from west to east (see Fig. 3.5)), in other words on the cusp of the higher part of the field before it dips somewhat more steeply to the east. The absolute quantity is tiny but that said some calibration is required given that sherds of this period are far less common finds generally than say Roman or medieval pottery in ploughsoil assemblages. The items occur within the area of greatest Roman sherd presence but also spread further to the south; that is to say, with more than half found south of Line 14. Of the nine stints yielding Anglo-Saxon sherds six also yielded Roman pottery, suggesting either that Anglo-Saxon activity may approximately overlies earlier occupation, or that 'collector diligence' may be a factor. Three of the four sherds identified as Early Anglo-Saxon came from the area of the highest Roman sherd density while the Later Anglo-Saxon sherds were almost exclusively recovered further to the south.

Some 25 sherds were categorized as medieval, coming from 20 stints, with five stints yielding two sherds and all others one sherd. Green-glazed ware was present, include two small conjoining sherds. There is a fairly even spread of sherds of this category (Fig. 3.6). That these medieval sherds are spread more evenly with no particular cluster and in no relationship with the Roman items is underlined by the fact that approximately one third of the total number of stints overall contained Roman pottery, meaning there is a one in three chance that any stint taken at random would have Roman pottery, and of the stints yielding medieval pottery only one third also contained Roman pottery, suggesting the association is random.

Turning to other finds, there is no record of modern pottery items having been picked up during the line-walking, though there is one sherd in the overall collected assemblage (probably from the intensive survey (cf. below)). Only five pieces of brick or tile were recovered during this exercise, three from the area to the south and west of the chalk quarry pit, in the vicinity of the greatest concentration of Roman pottery sherds, though the cultural association of these CBM items is not known. This near absence of Roman CBM from the ploughsoil collection proved to be a

reliable indicator of its infrequency amongst stratified contexts upon excavation (which is probably an index of chronology as much as site identity (cf. Sections 7.9 and 11.7.6)). Eight pieces of slag were collected during this line-walking from across the field, with no particular concentration; the date of these finds is uncertain. One iron nail, and one shard of glass were also collected. No clay pipe, quern fragments or oyster shells were recovered.

Subsequent to the line-walking a less systematic 'intensive pick-up' was undertaken by the Society as a follow-up in 2005, in the area west and south-west of the disused chalk quarry (between Lines 13 and 21 and stints 2-5). This produced several hundred sherds of Roman pottery, plus other finds including two fragments of burnt bone. No recognizable prehistoric sherds were present. These Roman sherds were then amalgamated with the Roman pottery collected via the line-walking by the Society members and the total numbers are given in Table 3.4.

The Roman pottery items and other finds were subsequently studied in detail by Society members led by Brian West (West 2006). The pottery was sorted into sherd type (i.e. rim, base, body sherd categories and "general rim styles") and measurements and quantities were recorded, such as sherd thicknesses and weights. Featured items were then bagged individually and given a unique identifier code and lists of the principle pieces, diagnostic of form or with decoration (as in burnish lines or incised wavy lines) produced (West 2006). A selection of representative 'greyware' rim sherds were drawn by member Colin Coates, where sufficient of the profile was extant to merit illustration. Colin Coates took the opportunity to progress research on the fabrics/sources at that time. Drawings arising from this work are reproduced here (Fig. 6.4).

Quantification of the overall assemblage in 2016 by the present author resulted in the numbers given in Table 3.4. At over 700 sherds, collected under

Table 3.4 Summary of all Roman pottery collected by the NELALHS from Corner Field in 2005 via line-walking and intensive survey, as recorded in 2016.

Quantity:	Number of sherds	Weight (grams)	Average Weight
Sherd type:			
Rim sherds	123	1778	14.4
Body sherds	560	4329	7.7
Base sherds	57	1591	27.9
Totals	740	7698	10.4

the same circumstances within a comparatively brief time period, this assemblage should provide a reasonably reliable impression of the Roman ceramic vessel material within the modern ploughsoil. The overall Estimated Vessel Equivalence by rims (RE) is 7.50, and the corresponding figure with the bases is 8.54. The vast majority of the Roman sherds can be characterized as 'greyware', specifically coarse ware, largely in quartz grain tempered wares and typologically late Roman, where sherd attributes are indicative of date. As regards form it must be borne in mind that this is a ploughsoil assemblage wherein sherds are mainly comparatively small and abraded; the large majority of items are likely to be from bowls and jars, together with some dishes, and several beakers, and on the whole of utilitarian nature. At least one lid and the spring point for a handle (probably from a handled jar), are also present. This assemblage is remarkably consistent in this respect, being restricted in repertoire. Judged against pottery from the excavations, and in particular with chance finds collected from the field surface during the subsequent fieldwork seasons, it is essentially broadly representative. Exceptions to this general rule are the absence from the extant assemblage of oxidized types and unusual forms that one might have expected to have occurred in small numbers, given the large size of the assemblage gathered in 2005. There is no samian, for instance, although this is perhaps explained by the fact that the main floruit at the site is in the fourth century AD, long after samian had ceased to be imported into Roman Britain. However, there is a lack too of colour-coated ware, Swanpool oxidized coarse and finer wares, such as dishes and bowls including mortaria, and indeed no mortaria of any sort. Dales ware type rims and indeed calcite tempered sherds (the standard fabric in which Dales ware types occur) generally are also infrequent, being less common than in the excavated groups. A possible explanation in this latter case is the nature of their fabric, with the tempering inclusion making this fabric range vulnerable to chemical weathering, creating voids that open the sherds in ploughsoil to frost shattering and disintegration through weakness, meaning that sherds after time have simply broken down. The same will be true of course for post-Roman pottery similarly tempered. The fieldwalking survey team were evidently diligent in collecting even very small sherds of unprepossessing nature (grey sherds from a dark soil background) so are unlikely to have missed much; this would suggest that oxidized and other types will have been collected were they present. Further, such items were not lost through selection or separating out of oxidized wares

and fine ware items, as Colin Coates (pers. comm. 2016) recalls that such 'non-greyware' was simply not present. Moreover, there is nothing in the archive listing or the report of Brian West indicating that such items were encountered on the field at that time (West 2006); West does refer to the presence of colour-coated ware, though in a non-specific manner (West 2006, 1)). Nonetheless, the picture remains inconsistent with the earlier surface finds of Darren Campbell and from the excavations, wherein oxidized items, including slipped wares and samian, together with mortaria were present; possibly the 2005 collectors were finding so much grey pottery they began to see only grey pottery?

Some 123 rims sherds were collected with an average weight of 14.4g (though discounting one unusually heavy rim (106g) brings this average down 1g). Rims are often a quite robust part of a ceramic vessel and in the case of this material some rims are thickened. When there is a short neck the projecting rim terminal and shoulder can result in compact relatively small sherds that are able to withstand impacts that might fragment body sherds of equivalent weight, where they might lack such compact curvature. The data plotting the weights of the 123 individual sherds show that whilst the average weight is 14.4g more than half the rims weigh 11g or less, suggesting this group is at an advanced state of fragmentation (cf. Section 9.4.1). Figure 3.7 shows the frequency of rim sherds by individual sherd weight; this plot demonstrates the wide range of weights, and individual numbers of sherds per weight are on the whole modest. The drop-off in the frequency by weight (as weight rises on the horizontal axis is an overall trend from around 11g; the peak of sherds at 5g is probably not significant given the absolute low numbers involved).

The average sherd weight for the base sherds is 27.9g which is a comparatively high figure, being all but double that of the rims. Pottery vessel bases are often thick and more robust than other parts of vessels and fragment less readily, particularly (though far from invariably) at the junction of the wall and the vessel floor where they can be thicker than at any other point. Given the majority of the vessels represented are utilitarian coarse wares the vessels in question are likely to be relatively thick rather than finessed. The average percentage of base circumference on these figures is 15% per base sherd, but this masks the fact that the large majority of cases are 15% or lower, with only 16 items (of 57) over 15%, including one complete base. These trends seen in the fieldwalked Roman assemblage from Corner Field are consistent with known trends that demonstrate that EVE and

average weight data can be more erratic with base sherds than that for rims, due to this tendency for bases to be less frequent finds and, when recovered, often to represent a comparatively large proportion of the former vessel, more so than sherds from other parts of the vessel (Fig. 3.8). Figure 3.8, however, shows essentially a normal distribution, albeit with a long, if sporadic, tail.

Turning to the 560 body sherds, these have an average weight of 7.73g, around half that for the rims. This figure indicates an advanced state of fragmentation such that sherds have reached their optimum point of breakage; that is to say, given their thickness and lack of curvature, as they are already small, it is unlikely they will readily break further under normal ploughsoil circumstances, though they

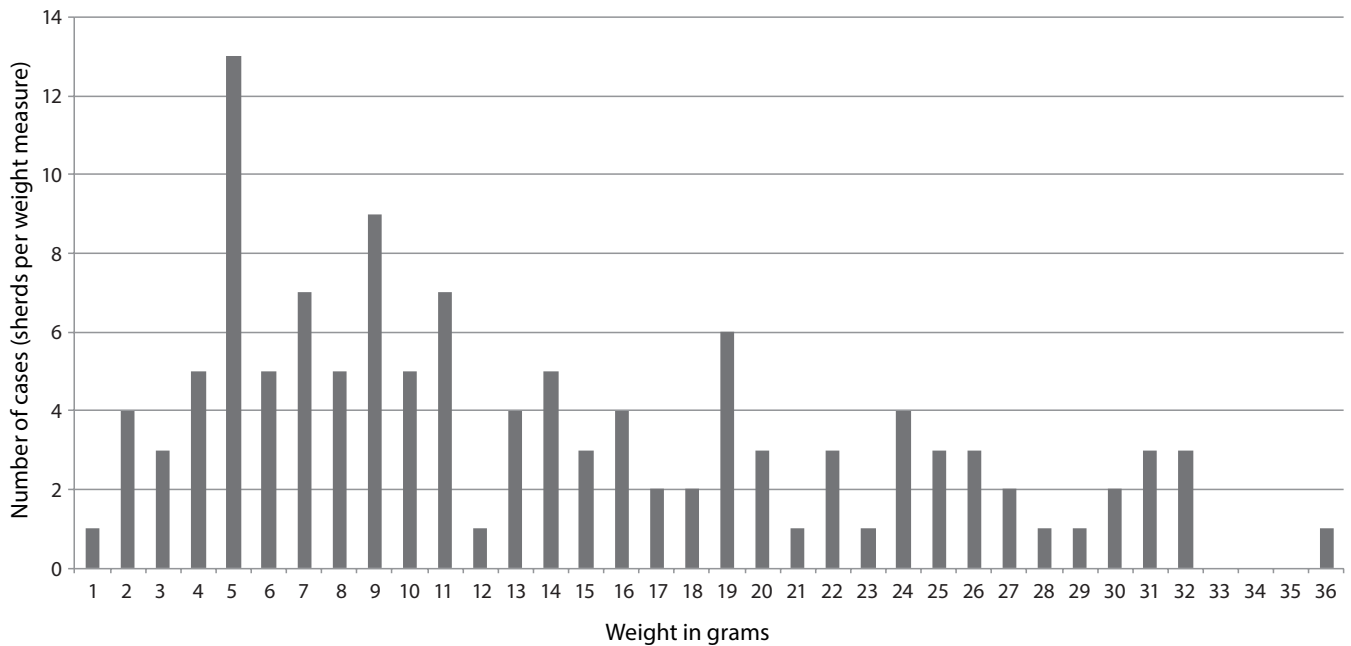


Fig. 3.7 Graph plotting Roman pottery rim sherds from fieldwalking in Corner Field by the NELALHS in 2005: frequency by individual sherd weight (i.e. number of sherds per gram weight; N=122 - one rim not available at the time of measurement).

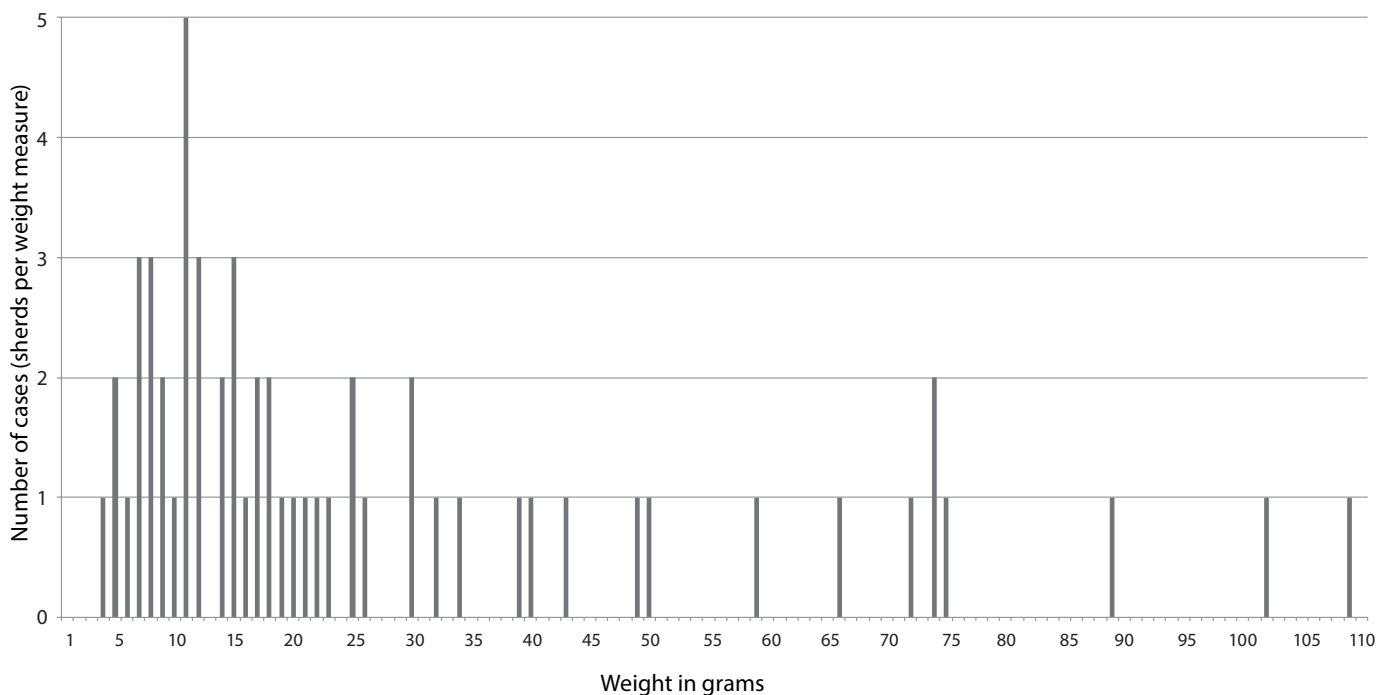


Fig. 3.8 Graph plotting Roman pottery base sherds from fieldwalking in Corner Field by the NELALHS in 2005: frequency by individual sherd weight (i.e. number of sherds per gram weight; N=57).

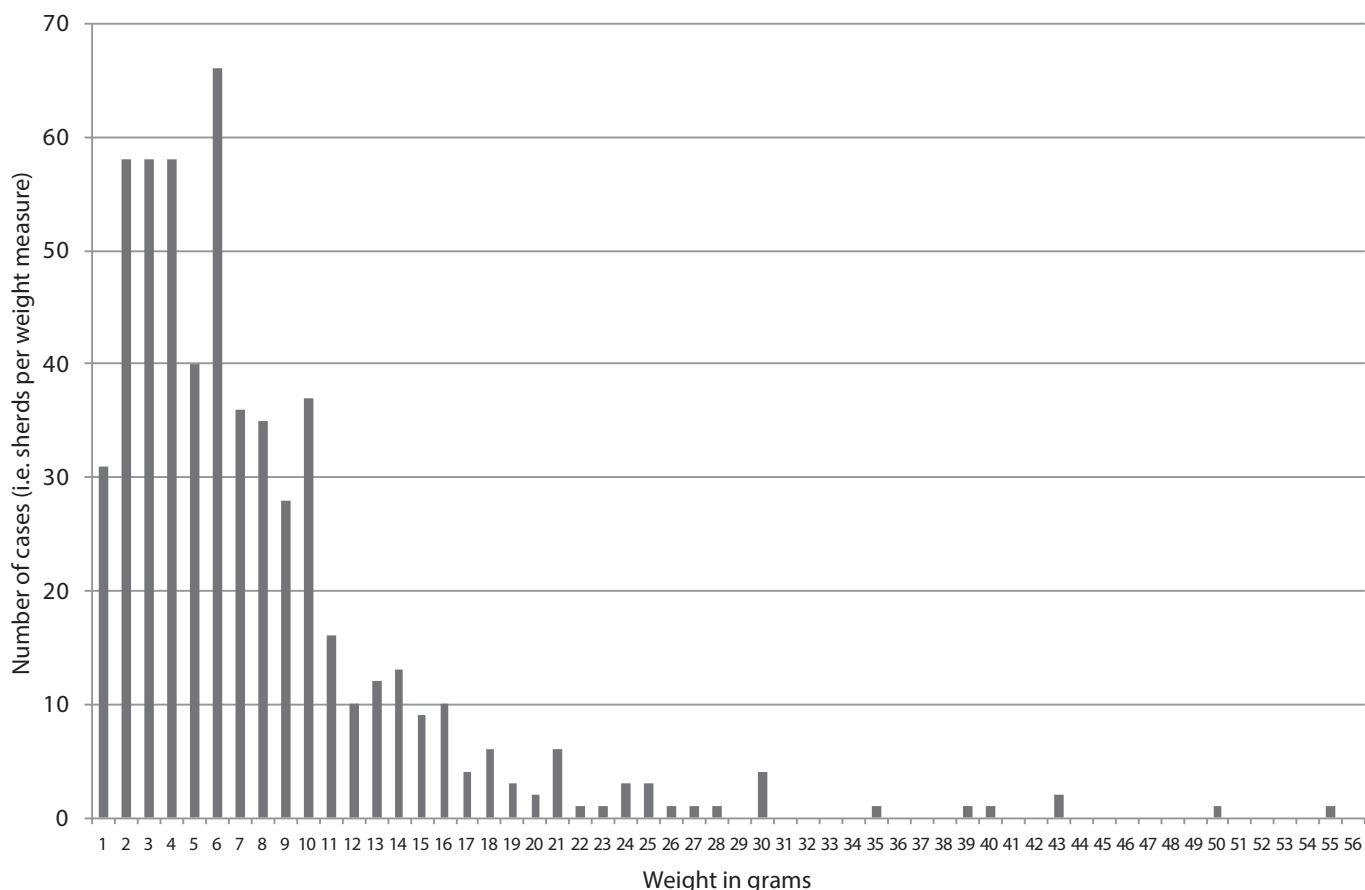


Fig. 3.9 Graph plotting Roman pottery body sherds from fieldwalking in Corner Field by the NELALHS in 2005: frequency by individual sherd weight (i.e. number of sherds per gram weight; N=560).

will continue to abrade (cf. Taylor 1999). Whilst the average weight is just under 8g this masks the fact that the presence of a smaller group of heavier sherds boosts the average: in fact 382 of these 560 sherds (68%) are 8g or less. Figure 3.9 charts the frequency of these body sherds by individual sherd weight; this plot shows the large proportions of sherds with low weights (1g, 2g, 3g, etc.) which confirms how assiduous the Society members were in collecting even very small featureless wall sherds. The drop-off in the frequency by weight (as weight rises) is marked after c. 10g. There are a couple of anomalies where the figures drop and then climb, as with there being 40 sherds weighing 5g and then 66 weighing 6g. In the round with such data a single gram difference is not significant in terms of the general trend; the anomaly may perhaps be a function of the physical thickness the parent vessels tended to be made to, resulting in a propensity to not readily break further after a certain size and pebble like form is reached (cf. above).

In his assessment of the pottery from the fieldwalking of 2005 Brian West noted that “The

evidence lying on the surface is ... if nothing else at the mercy of the weather but it also suffers at the hands of agriculture” (West 2006, 11) having been subject to hundreds of ploughings and harrowing activities, more recently with modern heavy and powerful machinery. This may explain such a highly fragmented assemblage. That said though there are essentially no fresh breaks, nor conjoining sherds, amongst this ploughsoil assemblage and few larger sherds that might suggest fresh erosion of any *in situ* sub-ploughsoil cultural deposits. The sherds collected by the Society show much abrasion and this suggests they have been present in the ploughsoil for a prolonged period. Another aspect is the question as to how fragmented were these sherds when they first entered the archaeological record, as the deposits of the ancient site at Hatcliffe Top were created. The data on the pottery from the excavations goes some way to exploring that matter. Further details on the typology of some of this surface collected pottery are given in the section on the pottery from the site (Chapter 6; cf. Section 11.5).

3.4.3 The 2005 Excavation Trench in Corner Field by the NELALHS

Steven Willis, with David Robinson and Colin Coates

Subsequent to their fieldwalking in Corner Field in the spring of 2005 the Society decided to undertake an exploratory excavation in June that year. Although Corner Field is an arable field in that year the field had been left fallow the whole year as there was a common practice of 'set-aside' at that time, leaving fields fallow on a rotation. Hence the area was accessible and the farmer, Mr James Walker, kindly consented to the intervention.

The spur to the excavation was the indication from aerial photography of the existence of linear and curvilinear features in the south-west corner of the field, though only showing there and not across the field, backed-up by the fieldwalking results indicating Roman and Anglo-Saxon activity and perhaps settlement within the area of the field (cf. Section 3.4.3). No geophysical survey nor systematic metal detecting had been undertaken up to that point and the guides to the archaeology of the field at that time were simply the surface collected finds and the cropmark evidence. As it happened the cropmarks (Fig. 3.10) occurred in an area of the field that had yielded only infrequent pottery in the 30m stints, with Roman pottery,

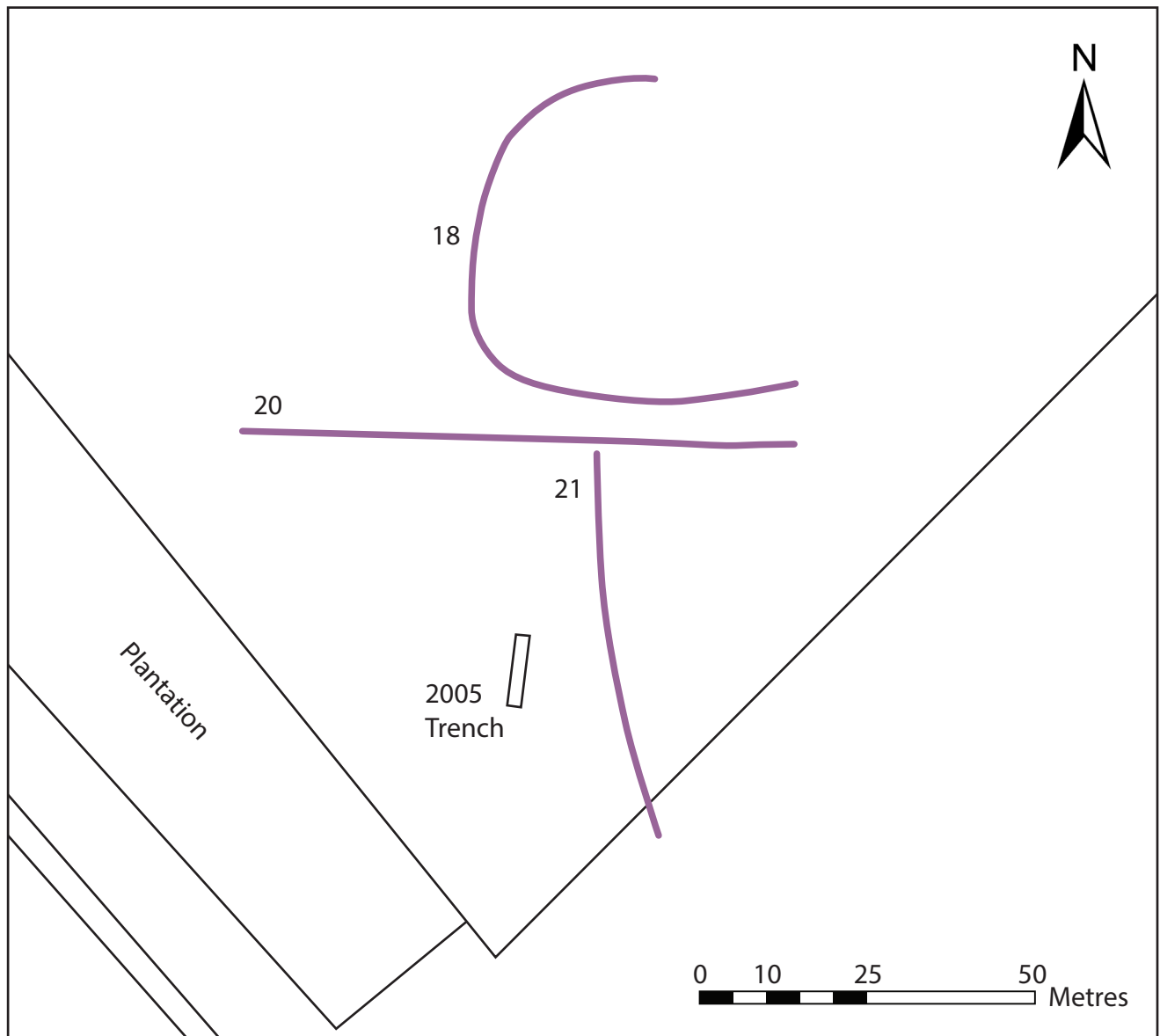


Fig. 3.10 The location of the NELALHS trial trench of 2005 in the south-western quarter of Corner Field; showing also a plot of the only cropmarks known from this field (the cropmarks are numbered with their equivalent as per Fig. 3.13).

when present, only occurring as single sherds (per stint) with no prehistoric pottery or Anglo-Saxon material recovered. These cropmark features proved to correspond with the findings of the geophysical survey (Fig. 3.12) comprising anomalies 20, 21, and the western side of 8 (21 extends southward into Stable Field), as defined by the results of the survey. A trench aimed at examining the cropmark features was considered a logical means to progress understanding of the site. The excavation was proposed by Edward Dickinson the then County Archaeologist for North-East Lincolnshire and chair of the NELALHS; he organized and supervised the excavation shortly before moving to take up a post with West Sussex County Council later that year.

The aerial photography showed three principal features, as darker curvilinear marks in the field crop, known to be a typical indicator of the presence of buried ditches (see Fig. 3.10). One was a linear feature extending for approximately 60m from the southern edge of the field, near to its south-west corner, northward. It looked to terminate at the northern end of its traceable extent where it was met by a second linear feature running east-west, detectable for a distance of c. 90m. These two features, being generally straight, formed a 'T' suggestive of former enclosure or field plots of regular form. A third feature was curvilinear and traceable for c. 90m. It lay to the north of the second linear mentioned above, and, on its southern side formed a parallel (presumably) ditch around 7m to the north of the second feature, the cross of the T. However, to the west it arced round by c. 45° to then extend north before turning again to the east, thereby suggesting it was potentially one side of a large oval or D-shaped enclosure. This limited cropmark evidence suggested the former existence of land organization features on a completely different alignment to the layout of the modern post-Enclosure fields. Although limited in extent and not especially diagnostic any activities they will have related to, the arrangement of these features suggested at the time a later prehistoric (Bronze Age or Iron Age) or potential Roman date. The aerial reconnaissance surveys conducted by Dilwyn Jones (1989; 1998a; 1998b) show that the eastern side of the Wolds tend to produce far fewer cropmark features and site evidence than the western and central Wolds, and the occurrence of cropmarks indicative of ancient features on this eastern side was considered significant. Local conditions within the field in the south-west corner may have assisted in the generation of these cropmarks and it is suggested that in different years circumstances might reveal

more cropmarks elsewhere in the field. A limited excavation was undertaken with the intention of locating the intersection of the 'T'; this would examine the character of the ditches that seemed likely to have given rise to the cropmarks, while hoping to recover some dating evidence. The location of the cropmark features was measured from the air photograph using available points around the field margin, and the position of the exploratory trench was decided upon on that basis. Such traditional plotting is known to often produce fairly accurate projections of the location of features, though is not always exact, given the number of variables, not least because the photos being worked with may be oblique.

The excavation took place over the weekend of 25-26 June. The southern corner of the trench lay 39.5m into the field from the southern corner of the field and the northern corner approximately 33m in from the southern and western boundaries of the field (Fig. 3.10). Crop stubble from the previous year was still standing with weed and grass generation. The trench was opened, using hand tools and measured 10m by 1.2m, oriented approximately north-south (Fig. 3.10). The ploughsoil was found to be comparatively thin at c. 23cm in depth at the north end of the trench and c. 30cm deep at its southern end. The soil had of course not been aerated by ploughing for months and was settled; the excavation occurred in the higher part of the field on the edge of the plateau of Hatcliffe Top where one would anticipate thinner soils but this variability in depth was not much different from the ploughsoil thickness subsequently encountered elsewhere in the field. The ploughsoil was all sieved and scanned using a metal detector to assist the recovery of finds. Following its removal the base of the trench was cleaned by trowel. Below the ploughsoil was a uniform sub-soil of reddish-yellow clay somewhat sandier than that encountered subsequently at the trenches on the north side of the field in later seasons. A series of narrow incisions into this surface, in a criss-cross arrangement, were recognized as plough-cuts and it was speculated that they represented pre-modern cross-ploughing cultivation as they were not aligned with the present field boundaries. They were not continuous as with modern sub-soil plough cuts but appeared intermittent and triangular in profile, suggesting to Colin Coates that they may have been produced "by the 'stick-and-slip' nature of animal drawn, humanly guided plough" (pers. comm.). However, there was no dating evidence recovered and the soil in these narrow cuts was not noted as markedly different from that of the modern ploughsoil. Mr Walker observed



Fig. 3.11 The NELALHS trial excavation underway in the south-western quarter of Corner Field in 2005, looking north-east.

that he ploughed to a depth of about 9 inches (c. 23cm) in the field, though subsequent observation indicated this could in practice be lower, and given the thin depth of the ploughsoil at this point modern disturbance creating such scoring must be considered a possible explanation. No other features were identified in the trench.

The clay layer across the length of the trench was investigated by means of two small sondages; one was placed at the northern end of the trench and cut to a depth of c. 50cm, while the second was in the centre of the trench, in the form of a slot, cut to a depth of 30.5cm. At neither location was the base of the clay reached. The excavated clay was found to be homogenous through its expanse and depth.

The ploughsoil produced a small number of abraded sherds of Roman greyware and animal bone fragments. No finds were recovered from the clay. A small worked flint item (Chapter 5, Catalogue A 1) was recovered from the surface of the clay, and thus was unstratified. This blade-like flake is dated as Mesolithic/Early Neolithic (see Bishop below,

Chapter 5). The finds were lodged with North East Lincolnshire Council.

Apart from the apparent plough marks no features were encountered and hence the existence of sub-surface ancient features, ditches or otherwise, was not proven. It was believed by the excavators that the trench was in fact sited to the south-west of the T of the cropmarks, missing it by perhaps less than two metres. In fact comparison between the location of these cropmarks as suggested by the later geophysical survey results and location of the trench according to the measurements cited above places the trench some distance from the target cropmarks (Fig. 3.10), presumably as the projection from the oblique aerial photograph was not sufficiently accurate. The clay at the base of the ploughsoil was thought at the time to be Boulder Clay and there is no reason to doubt that identification with the knowledge we have of the presence of cover deposits elsewhere at Hatcliffe Top. That the trench revealed a thick till deposit at this location is consistent with the known capping of the eastern Wolds by glacially derived deposits (Straw 2008; cf. Fig. 1.5). At this location the clay is thicker than encountered elsewhere which may be due to the slightly higher elevation and flatter disposition. Trenches A-F excavated between 2007 and 2015 were located c. 200m further east, at a lower elevation as the edge of the Wolds dips definitively to the east and so it is likely the clay till has been eroded in that location by various processes, and the 'feathering' of this deposit is thinner or completely removed, and in those places exposing chalk immediately below the ploughsoil. It is likely that the linear features showed at this location as cropmarks due to some differential drying aspect of the slightly sandier subsoil deposits, specific to the time of the photograph, whilst not, in contrast, showing in the areas where the clay cover was thinner or absent. Subsequent aerial images have shown some extension of cropmarks to the south-east, into the area of Stable Field. No further excavations were undertaken at this location or elsewhere in this corner of the site.

Around the time of this excavation and then again during the excavation of Trench A in 2007 surface examination by David Robinson and in particular Hugh Winfield, recovered several flint finds and a human tooth by the southern edge of the field (HER 0646/1/0 TA 23014 02108; see Chapter 5, Catalogued items B 5- B 8). Searching in later years revealed no further lithic finds from this locality.

3.5 Geophysical Surveys 2007-2016

3.5.1 Geophysical Survey Results: Corner Field

Corner Field was surveyed by magnetometry in two phases of work, as circumstances allowed. The surveying used Bartington Grad601-2 fluxgate gradiometers and was arranged by 30m grids; instrument sensitivity was set at 0.1nT, with a sample interval of 0.25m and a traverse interval of 1.0m, thereby providing 3600 sample measurements per 30m grid unit. The initial survey was undertaken during the time of the excavation of Trench A in 2007. This was conducted by Archaeological Services of the University of Durham who were commissioned by the author to carry out the work and report the findings (ASDU 2007). This operation was paid for from research funds made available by the University of Kent. Mr Walker had, at short notice, discd the field in advance to assist the survey. During this operation the greater part of the western side of the field was surveyed in the time window available (an area of c. 2.2 ha). Nonetheless the area surveyed was less than half the area of the field, and represents 40% of the area of the completed survey. The survey of this field was completed in September 2016 by Lloyd Bosworth and Dr Andy Bates (of the University of Kent) following harvest and with low standing stubble. It had not proved possible to advance the survey in Corner Field before that time as the University of Kent did not have a magnetometer before mid-2009 and in the following years this equipment was either in use elsewhere at the time of the fieldwork seasons (2010, 2011, 2012) or there was a standing crop in the field (as in 2014 and 2015). Raw data from the surveys was processed using Geoplot v.3 (in 2007) and subsequently TerraSurveyor 3.0 (2016), enabling Lloyd Bosworth to produce a combined greyscale plot on a continuous scale from black to white (having employed standard basic processing functions). In this greyscale image positive magnetic anomalies are displayed as dark grey and negative magnetic anomalies as light grey; a palette bar relates the greyscale intensities to anomaly values. The combined results from 2007 and 2016 are shown in Fig. 3.12 together with those for adjacent areas surveyed by the same method in 2015.

Considering the results, there are relatively few discrete dipolar magnetic anomalies that can be taken to indicate ferrous items or fired debris, suggesting the field is comparatively free from modern debris/rubbish, such as horseshoes and brick fragments. Positive or

high magnetic anomalies of linear/curvilinear type showing on the plot as darker elements are, however, a prominent characteristic of the results (Fig. 3.12). Such features are consistent with soil-filled ditches and gullies, enclosures, etc. The western side of the surveyed area is higher plateau and the results show a series of rectangular enclosures in the central and northern area on this side, while the south and west of this area has a different scheme of features suggesting curvilinear ditches. The easterly half of the survey has less detected anomalies, with a few linear anomalies and some large discrete disturbances. This half of the field includes the sloping land off the plateau, through the centre of the field, and the lower land on the north-easterly side; the difference in the pattern of anomalies and sub-surface features closely corresponds with these topographic differences. Erosion off the edge of the plateau and slope is highly likely, with corresponding accumulation in the easterly part of the field, potentially masking sub-surface features. Considering the easterly half of the survey area first two linear anomalies run north-west to south-east from the eastern side of the chalk quarry towards the middle of the field on this eastern side, at an angle across the natural slope. Anomaly 1 is a stronger contrast. This seems likely to be the feature sectioned in Trench F in 2010 (see Chapter 4). It is traceable for c. 60m and following a gap of c. 30m appears to have a continuation for c. 30m in anomaly 3. Anomaly 2 lies close to anomaly 1 a short distance to the north-east and traceable for c. 50m seeming to join with anomaly 1 at its south-eastern end; this feature looks to continue into Mill Close as anomaly 109 (cf. 3.5.2). On similar alignment is anomaly 4 which runs parallel to 3 some 16m to its south-west and discernible for some 90m from the south-east corner of the field, suggesting these two features may define a trackway which continues with anomalies 1 and 2, running at an angle across the natural slope and leading from Mill Close to Barton Street over a distance of around 250m. Anomaly 5 in the south-east corner of the field and traceable for c. 40m lies at a right angle to 4 so may be part of the same scheme. To the north-east of anomalies 3 and 4 a Bing aerial photo shows two short parallel linear cropmarks extending at an angle to the hedge, just beyond the area surveyed by magnetometry; these may relate to the response reading anomaly 57.

Two comparatively long curvilinear anomalies extend from south-west to north-east through the centre of the field, from the plateau to the lower land. The more southerly of the two, anomaly 6, is traceable for c. 115m from the rectilinear enclosure on the plateau (45) to a point where it meets anomaly 3.

This feature appears potentially to extend further to the west over the plateau, identified here as anomaly 6a, for at least a further 60m, with anomaly 19 a further potential continuation. This feature appears to have been recut as from a point 60m west from its north-eastern terminus it divides into two separate parallel linears running south-west to the rectangular enclosures on the plateau: either the boundary was narrowed or broadened, or, these relate to separate schemes (the more northerly here is labelled 6b). It is worth noting that at its north-east terminus this feature appears to split. The more northerly arm of the pair, anomaly 7, follows a similar slightly sinuous route from the plateau to the lower land for c. 110m east of the rectilinear enclosure 44 and 45, possibly extending beyond anomaly 2, as there are two faint potential linear anomalies opening on to the lower east side of the field (7c and 7d). An evidently separate straight anomaly (13) traceable for at least 35m over laps 7 by its intersection with anomalies 1 and 2 though this might simply be a medieval furrow. Anomaly 7 may likewise continue into the plateau area beyond (44 and 45) as faint anomalies suggesting alternative possibilities (7a and 7b) to the south-west. These are less clear than with 6 and 6a. Specifically, a faint linear anomaly (7a) seems to continue the course of 7 west of 44 and 45a, cross the area also occupied with 27 and join anomaly 28; alternatively the course could turn more sharply to the north-west and join anomaly 32 as suggested by a faint linear anomaly. If either or both of these scenarios are correct (with say more than one phase) this would mean 7 and 7a extend all the way to the western end of the surveyed area. Taken together anomalies 6 and 7 resemble so-called antennae ditches, perhaps serving as a funnel widening from c. 20m on the plateau to c. 55m across in the lower area. This may have been for livestock entry and exit from the plateau (where there are larger enclosures) opening to the lower land and Waithe valley in the area of Barnoldby le Beck Park. Possibly these linears continued further eastwards more emphatically but are masked by colluvium. If this feature is later than that seemingly represented by anomalies 1-4 it may be that its use resulted in an almost complete obliteration of those features between its arms as implied in the survey plot (Fig. 3.12). Both of the eastern terminals of anomalies 6 and 7 - or at least where the stronger response ends - have fan-like spreads to their east suggesting disturbance/activity interfering with the background register.

Between anomalies 6 and 7 are two point anomalies c. 8m and 12m across, anomalies 8 and 9. These look to be areas of disturbance and perhaps represent events involving burning, with the more southerly of the two

(8) having a likely high metal content given the nature of the response. Towards the south-east corner of the field occur two large adjacent anomalies, presumably pits. One (anomaly 10) is up to c. 15m across and the other (11) c. 12m across; these may represent backfilled chalk quarries. Both of the latter show on aerial photos, being amongst the few features to show as cropmarks in Corner Field. A further anomaly, (12), west of these pits by the southern edge of the field registers as a rectangle c. 20m by 16m; this likely pit is visible as a crater in the field but of dished form rather than appearing almost square as in the data plot. This is a somewhat surprising shape and it is not aligned with the angle of the natural slope in the field. It may be a partially filled chalk quarry though it is worth noting that worked flints have come from this general area and so further investigated at some future date may be warranted.

A pattern of straight furrow lines (from rig and furrow cultivation) is evident from the survey across this eastern side of the field (anomaly group 56). The alignment is consistent with the present field boundaries but both reflect the natural grain of the landscape here with the furrows running at right-angles to the slope of the field through this half of the surveyed area. The pattern could suggest that the Hatcliffe road (and Barton Street) were already extant at the time of the system and the arrangement of the cultivation respects the roads, but in the case of the Hatcliffe road its course might rather have been determined by the established alignment of this medieval cultivation.

A short distance west of anomaly 12, moving up the slope, two curving parallel linear anomalies (14 and 15) seem to be the most easterly element of a trackway and enclosure complex within the south-west quarter of the field. 14 and 15 are about 7m apart and discernible for c. 60m, perhaps meeting anomaly 16, although that relationship is not clear as the definition of the anomalies is lost at their northern end. Anomaly 16 is a straight linear feature (c. 22m in length) to the north east of 14 and 15 which, after c. 26m turns a dog-leg to a further straight linear anomaly (17, some 30m in length) which gave a similar reading on the survey. These linear features look like the return of 14 to form an enclosure. To the west of this putative enclosure is a large loop-shaped enclosure (anomaly 18) which was perhaps contemporary with the 14-16-17 enclosure, sharing a common linear divide in the form of anomaly 17. The enclosure formed by 18 measures c. 65m by c. 48m. On its south and west sides this feature produced a strong signal as did other anomalies in this quarter of the field. The western side of this feature showed on an aerial photograph before 2005 (cf. Fig. 3.10).

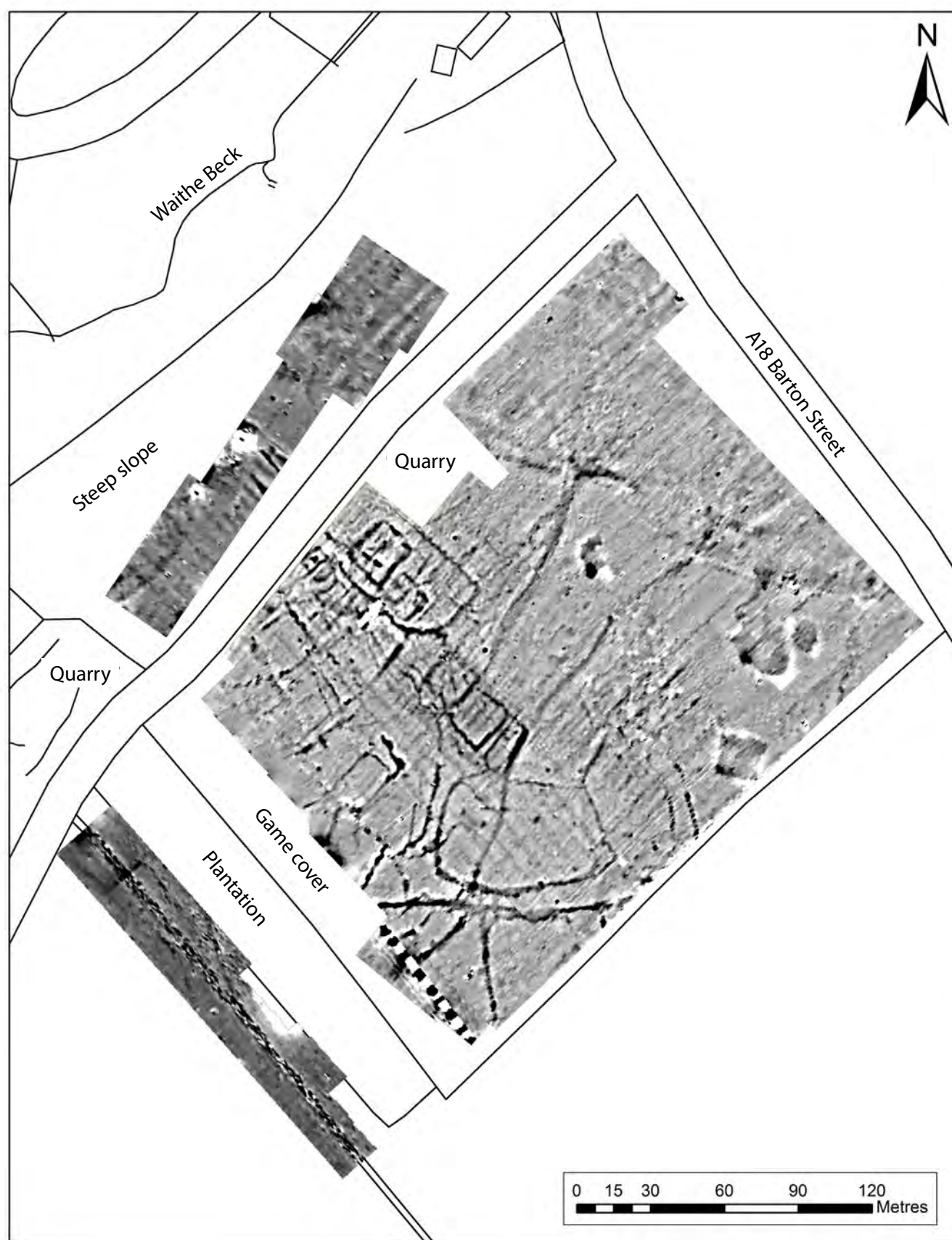


Fig. 3.12 Geophysical Survey Plot.

Amongst a number of strong positive magnetic anomalies detected in the south-west quarter of the field a linear anomaly (20), aligned east-west, lies c. 8-12m south of enclosure 18. This anomaly traverses the surveyed area and seems to be the margin of a trackway extending into Stable Field. This could be one arm of a Y-shaped track arrangement with one other arm leading towards the Long Plantation and the other up to the series of rectilinear enclosures in the north-west quarter of the field. Anomalies 6a, 19, 21 and the possible continuation of 16 (16a) converge by this potential trackway. There is some possibility of gaps between these anomalies at this point judging from the plot although there is a lack of precise definition. However, there is a possibility that there were breaks at this point suggesting the trackway was a second phase of activity but with continuity in use of an access way or, if these are later features, they stopped at this trackway. That said, there is some indication that 16 links to 21 although the strength of the readings is different.

Anomaly 20 is met by another straight linear (21) in the southern corner of the surveyed area traced for c. 45m. This anomaly forms a T with anomaly 20 and they would appear to be part of the same scheme; both

20 and 21 were identified by aerial photography before 2005 (and with 18) their recognition was influential in the Society's placement of its trial trench in 2005. Part of a further anomaly 53, c. 50m east of 21, at a similar angle to 21 and extending to, but not beyond 20, may be related to 21 and the land organization it represents; aerial photos suggest this feature extends into Stable Field. Two parallel linear anomalies (22) traceable for c. 22m may relate to a small enclosure or trackway either earlier or later than linear 20; this feature might extend to the west. Finally, for this quarter of the field, a very strong dipolar anomaly (23) on the south-western edge of the survey is a modern buried ferrous water pipe that appears to run from Hatcliffe road to the farm at Hatcliffe Top, following the alignment of the present field boundaries and is marked in the hedge by the Hatcliffe road. This pipe, within Corner Field, which mainly underlies the western strip of the field customarily used to grow maize for game-bird cover, led to a decision not to survey along this margin as the distortion from the pipe would dominate and skew readings.

A curvilinear anomaly, 26, extends from a point around the western end of 20 to then arc over a distance of 60m to the north-west, occupying



Fig. 3.14 Corner Field looking east from the plateau to the lower part of the field and beyond, showing the difference in height between the western and eastern halves of the field. The hedge at the edge of the field lies beside the A18 Barton Street and the Waithe lies some 250m beyond the road further to the east. The southern end of the woodland extending from Barnoldby le Beck is on the horizon. Stan Little with his metal detector is advancing from the east by the edge of the plateau.

the central western edge of the survey. A straight anomaly, 24, extending a little under 20m from the western edge of the survey area and aligned south-south-west to north-north-east meets 26; it may not extend beyond it although there is a faint trace of a possible continuation beyond. If these anomalies are contemporary then a segmental enclosure may thereby have existed. A further straight linear anomaly, 28, lying c. 22m to the north of 24, extends for c. 20m from the western edge of the surveyed area on a similar alignment to 24, but in this case extends beyond 26 to the enclosure, 27. Anomaly 25 is a 60m (60m plus?) curvilinear feature extending from a point along 26 northward to the rectangular enclosures in the north-west quarter of Corner Field. This looks to be a trackside ditch for a track running to/from the enclosures, and indeed, passing on from them to continue northwards, probably as anomaly 43. A straight linear anomaly (29) overlaps this feature, and if the faint readings to the west are part of the same feature it extends for c. 40m.

Turning to the north-west quarter of the field a rectilinear enclosure, 27, occurs slightly to the north of a mid-point on the western side of the field measuring c. 25m by 12m on a south-west to north-east alignment similar to other enclosures of rectilinear form in this quarter of the field. It may have had an opening to the south-west, while to its east and north-east is an L-shaped anomaly, 30, perhaps comprising contiguous smaller features, as the anomaly is suggestive of areas of intense burning/heat and potentially of the location of ovens or corn-dryers.

Two closely parallel linear anomalies extend south-west to north-east across the central area of the north-west corner of the field; 36 is the more northerly and is traceable for c. 130m; 35 lies c. 3.5m to the south and whilst less clear seems to extend for the same distance. As with anomalies 6 and 7 these features may have served to move livestock from the plateau to grazing by the Waithe as it crosses the Marshland for as with 6/7 it broadens at this eastern end. This terminus may have been truncated by ploughing as it is not traceable over the lower slope. Several faint potential linear anomalies exist by the western end of 35/36 suggesting enclosures. Anomalies 32 and 33 are parallel linears, c. 22m apart, extending west to east for 30m from the western edge of the survey. Perpendicular to 32 and 33 is a straight linear or linears, 31 and 37, running for 75m between enclosures 27 and 38, perhaps also closing several other enclosures on their western side. 38 is a rectilinear anomaly indicating an enclosure near to the northern limit of the survey measuring around 25m square. Its southern side may have been open as the apparent 'closure' is perhaps part of a curvilinear anomaly (39)

potentially of a different phase. 39 arcs from the edge of the survey near its north-west corner to run north-east towards the area now occupied by the modern quarry, for a distance of c. 90m. This feature seems to have a pair in a fainter linear (40) c. 16m to the south which follow a similar course before definition is lost in amongst the enclosure complex to the south-west of the modern quarry.

Some 25m east of enclosure 38 is a strongly registering curvilinear anomaly, 41, forming an approximate D shape, bordering a track to its eastern side and an enclosure complex with a high density of short linears, 60, to the west. This anomaly corresponds to the excavated ditch sequence at the north-eastern end of Trench A. As traceable on the geophysical survey it follows an essentially straight course south-east from the northern edge of the field for some 45m before turning to run south-west to north-east for 30m and then turns another right angle to the north-west, continuing then in that direction, being traceable almost to the northern edge of the survey. Between 38 and 41 the complex set of linear anomalies (60), some fainter than others, suggest a palimpsest of features and an area of sustained activity, probably representing ditches and gullies defining functional areas.

Three pairs of parallel anomalies, potentially representing lengths of trackway occur near the centre of the north-west quarter of the field, all aligned just off north-south. The most westerly, 34, lies between 35/36 and 38 and appears to belong to a different phase to 35/36. It is traceable for c. 24m narrowing towards its north end. Some 20m east from this pairing is a further pair of linear anomalies, 42, c. 3.5m apart and traceable for c. 25m, heading at their north end towards Trench A. Whether one of these anomalies (ditches?) continues north of Trench A is not established but there seems some possibility from the plot. The third pair of anomalies lies a little to the south-east of 42, being 43, traceable for c. 15m; 43 may be a continuation of the apparent trackway 25. There is a slight 'wiggle' between 25 and 43 but this interpretation seems probable. To the south-east of 43 are three well-defined rectilinear anomalies defining enclosures. The most northerly is 44, which is c. 18m by 15m; beyond 44 is 45 which is slightly off-set from 44 and somewhat larger at c. 20m square. South of this there is a short gap, probably an access-way, before the final of the three rectilinear enclosures, 58. This is more of an oblong shape, c. 22m by 7m.

Within the loop (or 'D') created by anomaly 41 is a possible small sub-square enclosure, 46, perhaps around 15m by 15m. This small area shows a number of linear anomalies and this might be two small

enclosures divided by a further anomaly. To the east of 46 are two linear anomalies within 41 and traceable for c. 12-15m (49). North of 46 is what appears to be one of the most well-defined rectilinear anomalies representing an enclosure, apparently c. 22m by 16m, with a potential opening to the east, 47. However, the excavation at this location (Trench D) showed that in actuality there was no simple enclosure here. The south side of the anomaly is a Late Roman ditch (cut [4031]) while the north-east side is formed of a ditch of mid-Roman date, [4075], which two corn-dryers had been cut into; the strong readings relate to the quantities of burnt material around this area within feature fills and in layers. The mid-Roman period ditch can be seen to extend south-east of the 'enclosure' as a faint anomaly, 48. Two strong anomalies within this apparent enclosure have the character of signals from further ovens or corn dryers (59). The anomaly on the west side of the enclosure may be a trackside ditch (50) continuing south-east from the northern margin of the survey and extending beyond 47 before turning a right angle to the east or forming the front of enclosure 46.

Two arcing anomalies, 51, in close proximity, overlap with the south-east corner of the enclosure formed by anomaly 41. These arcing anomalies are just c. 3m apart and could conceivably represent one third of the circumference of concentric ring gullies of a Bronze Age round barrow where the northern part has been lost through erosion. The diameter of the outer ring can be projected to have been c. 24m. Assuming this is a barrow then the loss of this side of the monument is explained by the fact that it lies on the edge of the slope of the plateau and may therefore have been flattened by 'shovelling-off' downslope and/or denuded by medieval and subsequent ploughing. This position, at a break of slope, is one known to be favoured for barrow construction in the Bronze Age. Iron Age and Roman settlements sited next to Bronze Age barrows are known, at, for instance, Rookery Hill, Bishopstone and Barcombe, East Sussex (Bell 1977; Rudling *et al.* 2002). However, in this case, since the enclosure ditch (anomaly 41) overlaps 51 if this was a Bronze Age feature it must have been flattened before anomaly 41 was instituted in the Roman period.

Characteristic rigg and furrow 'corduroy' can be seen through the western half of the surveyed area of Corner Field showing as weak positive anomalies, aligned south-east to north-west (anomaly group 52). This is most obvious as a band of strips through the middle of this western side. These features are confirmed by the identification of furrows in excavated trenches A and C, where they cut the top of Roman features and the glacial clay. The alignment is perpendicular to that of the rigg and furrow evident

in the eastern half of the field and the difference is explained by the topography, as the orientation differs between the plateau on the western side and the dip slope and lower land to the east. The alignments follow the grain of the land (the valley to the north and the Wolds edge to the east), which was also followed in the Roman period with co-axial arrangement of enclosures and tracks. The furrowing continues on the same south-east to north-west alignment into Mill Close, the field to the north (3.5.2). The geophysical survey plot also shows something of the present ploughing regime, with trace parallel alignments south-west to north-east across the field consistent with the favoured directions of ploughing. Trench A, open at the time of the survey, and its spoil heap are also shown in the plot.

Overall, at least four main landscape schemes can be extracted from the palimpsest of features detected by the magnetometry (cf. 11.3.2). Short of much more extensive excavation (which was not feasible) it is not possible to be certain of the sequence of these schemes or the dates for three of them: much more excavation would be necessary. Extending across the middle of the field are two linear features, presumably ditches, which look to have served for funnelling livestock to and from the plateau and Marshland. There is the enclosure and trackway complex in the south-west quarter of Corner Field which may extend into the north-west quarter; contemporary with this scheme may be the apparent trackway traversing the eastern side of the field which has a similar alignment to the trackway by the south-west corner. The morphology of this complex (formed seemingly by 14, 15, 18 and 20, etc.) suggests a potential Bronze Age date, not inconsistent with the paucity of material culture from this area (despite the strong anomalies and cropmarks). A third manifestation is the rectilinear enclosure scheme aligned south-east to north-west in a ladder-type sequence of similar sized enclosures. The alignment runs parallel with the edge of the dip slope off the Wolds down to the A18. Ladder arrangements are seen elsewhere on the Wolds, as at Walesby villa site where a sequence of (larger) enclosures follow in a string south of the villa complex, while elsewhere the enclosures are of a similar c. 30-20m square size, comparable to these at Hatcliffe Top, being known from aerial photography (Jones 1998a, fig. 11a). There is a particular intensity to anomalies towards the Hatcliffe road, on the western side of the field, while the marked ladder arrangement (41, 44, 45, 46 and 58) could be mirrored to a second 'ladder' to the west, where there are at least two similar sized rectilinear enclosures (27 and 38). It needs to be borne in mind that magnetometry tends to register locations with burnt material, metal elements and organic/domestic detritus and is unlikely to present

a full picture of archaeological and other features underlying topsoil/ploughsoil deposits. Excavation shows that this site has concentrations of features, including shallow gullies unlikely to be invariably caught in this type of survey. What the plot (Fig. 3.12) may be showing particularly well is features with the types of material mentioned above, and in particular the corn-drying ovens and deposits with associated debris; features with more sterile silts, perhaps of prehistoric date, or away from points of certain activity, may register less clearly, if at all.

The geophysical survey results show that whilst there is a concentration of features to the south-west of the modern chalk quarry consistent with surface finds from fieldwalking and the focus of the excavations, activity extends across most of the field which the fieldwalking was less able to identify and which ideally would also have been subject to sample excavations. There was no opportunity to undertake the latter, though that might have been a priority had geophysical results from across the field been available before September 2016, by which time the focus of the Project had shifted to the site at Brookenby.

3.5.2 Geophysical Survey Results: Mill Close

To the north of Corner Field, north of the Hatcliffe road, a comparatively long narrow field under grass descends to the Waithe beck (c. 300m in length). At the eastern end of this field lie the former watermill and houses at Waterdell while to the south-west is the quarry discussed above (Section 3.1.2). This field now has no formal name. It has been used in recent decades as a paddock for horses and it is referred to here, following the 1841 Tithe map, as Mill Close. That record documents that it was likewise then under pasture; given its gradient to the north and its undulations it has probably been pasture since first being enclosed; perhaps traction horses were once grazed here associated with the mill.

Horses were customarily present during the period of the project reported here and that had meant there were access issues. With Mr Walker's permission it was possible to undertake some magnetometry survey in this field on the 8th and 9th September 2015. The survey was undertaken by University of Kent students with the direction of Lloyd Bosworth who then plotted the results. The survey examined a strip along the southern edge of the field in the area immediately north of the Hatcliffe road and adjacent to the known remains in Corner Field to the south (Fig. 3.12). The purpose was to establish whether the types of anomalies detected

in Corner Field extended into Mill Close or indeed whether there were other detectable traces. Hence the aim was to establish whether there was a terminus to the ancient site known in Corner Field, contrasting anomalies or even building traces. The scope for survey was limited by the terrain. After a relatively narrow margin, which continues the plateau on which the site in Corner Field lies, the ground in Mill Close falls away steeply to the north at an angle of c. 45° and the surface cover becomes rougher dotted with scrub bushes; equally, to the east, the field dips away, though more gently, reflecting the topography of Corner Field (see Fig. 3.1). A further complication is the existence of an overhead power line on this slope which likewise precluded survey north from the area sampled. Thus, beyond these margins the conditions are unsuitable to survey. In the circumstances it was possible to survey a length of six standard 30m x 30m squares, with some variation, but overall covering a length of 180m from south-west to north-east. From an origin at the south-west end of the field two 30m x 30m squares could be fitted in, followed by two squares short of 30m on the south-east-north-west axis (at c. 23m) and then two wider units (c. 40m by 30m) were possible downslope as the ground has less impediments and the gradient gentler (Fig. 3.12).

Some metres in from the boundary of the field, beside part of the southern margin, and within the area surveyed by geophysics are low linear earthworks, several metres in width and seeming to define a slightly lower strip, aligned south-west to north-east and suggestive of a former trackway parallel with the current tarmaced road. It is possible this was a track leading to the quarry opened in the Victorian period and now disused by the south-west corner of Mill Close (Section 3.1.2) and/or that it is a precursor of the modern road. This feature is recorded on the HER (0441/1/0; Fig. 3.3). The HER record suggests these earthworks represent "a road and possible building platforms" perhaps a hollow-way, possibly relating to the chalk pit. There is reason to believe that this track is the pre-enclosure course of the Barton Street to Hatcliffe road and that it took a course up the edge of the valley side from Waterdell to the 'plateau' at Hatcliffe Top to lessen the gradient of ascent/descent for wheeled and other traffic (the height difference is c. 22m over c. 300m from the mill). The modern road follows the straight lines of the modern enclosed fields, as seen on the Tithe Map, and is at a right angle to the slope, so recent traffic has to cope with a steep sudden ascent/descent. The alignments of the rigg and furrow scheme are parallel and perpendicular with this modern road, which may overlay this medieval cultivation scheme, certainly the furrows

in the western half of Corner Field, where they are perpendicular to the Hatcliffe Road, extend up to it, so perhaps they originally extended to this track in Mill Close. Most interestingly the furrows, as shown by the geophysical survey, do not stop at the old trackway and there is an overlap (most clearly in the western area of the survey), meaning the furrows would either underlie the road, implying it is later Medieval and early Modern and perhaps pre-Enclosure or possibly that it predates the rigg and furrow cultivation and so is of Anglo-Saxon and/or earlier date. In fact the former is the case as at this point the earthworks of the track are clearly extant as a positive feature (the rigg and furrow cultivation does not overlie them). This trackway can be seen in the geophysical survey (Fig. 3.13): part of its southern edge shows from a point around 50m north-west from the origin at the quarry end of the field and traceable for c. 70m headed to Waterdell (anomaly 101). The more northerly side is clearest nearer the quarry with an anomaly visible from the south-western edge of the survey curving somewhat over a distance of c. 50m to the north-east suggesting this relates to quarry access (anomaly 102), though this may not be an original feature but a development of the track following this institution of the quarry.

Approximately perpendicular to the long axis of the surveyed strip, through its first 90m, a series of linear anomalies traverse the sampled area (anomaly 103). These features must represent the continuation of rigg and furrow cultivation seen in Corner Field (anomaly 52) and presumably terminate not much further to the north of the sampled area given that the ground falls away markedly from around this point. A further three strongly defined anomalies on a similar alignment but not clearly traversing the sampled area occur on the south side of the surveyed area between 60-90m from the origin, being anomaly group 104 (Fig. 3.13). Possibly they relate to medieval cultivation and their strong readings may be reflecting some incorporation of Roman/Anglo-Saxon era detritus into the worked soil. Alternatively the survey could well have picked up linear features of Roman date extending beyond Corner Field into the area of Mill Close, a possibility supported by the shared alignment these features (anomaly 104) have with dated features from Corner Field, immediately the other side of the Hatcliffe road, as confirmed by excavation. Two point anomalies at c. 55m and c. 80m north-west of the origin line are produced by substantive metal objects: an electricity pole ground anchor point and a drain inspection cover (anomalies 105 and 106; this cover may relate to drainage from the Hatcliffe road to the beck); it is unclear what the 'noise' around these anomalies may represent. A further set of linear anomalies (group 107) occurs through the most easterly

60m of the survey running approximately parallel with the beck and the Hatcliffe road. These anomalies mirror the alignment of others at right-angles to the natural slope and are evidently a continuation of the rigg and furrow scheme north of that detected in the eastern half of Corner Field (Fig. 3.13). A further linear anomaly c. 20-25m in length (anomaly 108) occurs in the north-west corner of the surveyed area (Fig. 3.13); this could relate to the quarry or be an earlier feature. Finally, three linear anomalies occur near the western end of anomaly group 107, opposite the chalk quarry in Corner Field (anomalies 109-111) and which could well be pre-Medieval. Anomaly 109 curves slightly but is traceable for c. 25m; it could well be the continuation of anomaly 2 in Corner Field. Anomaly 109 may be joined by a short anomaly (111) which is not traceable beyond its intersection with 109 (cf. Fig. 3.13). Anomaly 110 is more sinuous and traverses the surveyed area from a point c. 110m north-west of the origin line on the south side to c. 145m north-east of the survey baseline on the northern side. Anomalies 109-111 would seem likely to predate the rigg and furrow and may be part of a landscape organization related to the Roman period activity. The only Roman artefact known from this field came from this area, namely a third century radiate found in 2003 (NLM-E8A5C5).

3.5.3 Geophysical Survey west of the Long Plantation

A further strip of magnetometry was undertaken immediately west of the Long Plantation on the west side of Corner Field (Fig. 3.12). The area consisted of a strip of six 30m by 30m squares which were surveyed on the 10th September 2015. The survey was conducted by University of Kent students overseen by Lloyd Bosworth who plotted the results. The area sampled spanned three contiguous surface types. Moving north-east to south-west these comprised: the grassed margin to the east of the farm track that runs from the Hatcliffe road to the farm buildings at Hatcliffe Top, the track itself, which is surfaced with compacted rubble and some loose road-stone, and the extreme north-eastern edge of the large arable field 'Home Field+'. The grassed margin or greensward lies between the Long Plantation and the track and extends for approximately 200m, being around 14m in width; it is cut for hay. The un-made track is slightly raised and the width of one vehicle. The arable field had just been drilled prior to the survey with no crop showing. Given that the aim was to establish whether geophysical anomalies continued west of the Long Plantation it was decided

to simply lay the 30m grid over these variations of surface rather than limit the survey to the grassed strip which may have produced too narrow a view of sub-surface readings from which to establish any clear outcome. Given that Home Field+ was recently sown Mr Walker asked that the survey not extend into the field. The six 30m grid squares were laid out from north-west to south-east, parallel with the edge of the plantation, between the track entrance and the southern terminal of the plantation. Around 90m south of the start of the survey (the survey origin) for around 35m, a row of large round straw bales laid along the edge of the plantation meant that the survey could not be taken to the eastern edge of the greensward at that point. Similarly the final square at the south-east end of the survey included an area used as a standing for farm trailers on the east side of the greensward and so a 30m by c. 7m band was likewise excluded (Fig. 3.12). The area surveyed was otherwise free of obstructions and, notwithstanding a gentle rise to the south, essentially flat.

The results of the survey are shown in Fig. 3.12. There are few anomalies. Between 60m and 100m south of the origin line are what may be two parallel linear anomalies aligned north-south (marked as anomaly 121 and anomaly 122 on Fig. 3.13). The more easterly anomaly (anomaly 121) is traceable from a southern point by the modern track running in a straight line to the limit of the survey by the plantation; the anomaly to the west (anomaly 122) is traceable from a southern point by the western limit of the survey, opposite the southern point at which anomaly 121 is detectable, and extends for c. 18m northwards. That anomaly 121 was not detected continuing into the area of the arable field could be the result of its removal by ploughing had it once continued there. It may be that anomaly 122 continues northward as anomaly 123 or anomaly 124 if it curves to the north-west. These two faint curvilinear anomalies occur north of anomaly 122 to the west of the track. Anomaly 123 extends for c. 30m and could be the resumption of anomaly 122 after a break. Anomaly 124 is fainter but is detectable for around 30m; it may be a continuation of anomaly 123 or a separate curvilinear form as there is a suggestion its southern end curves to the south, away from anomaly 123. A further linear anomaly (anomaly 125) is apparent to the east of anomaly 124, to the east of the modern track. Anomaly 125 extends for approximately 30m through a mid-point in the greensward from around 28m south of the survey origin. This anomaly may be a broadly parallel feature to anomalies 123 and 124, and if so there is a broadening to the northern end. There is a slight suggestion that this anomaly extends further to the

north-west and south-east. None of these anomalies appears to represent medieval ploughing (i.e. furrows).

Anomalies 121 and 122 evidently predate the present arrangement of the landscape. It seems improbable that they represent rigg and furrow cultivation as their alignment does not conform to any topographic feature or surviving anthropogenic boundary and is at variance with the alignment of the extant sub-surface rigg and furrow in Corner Field. The alignment of anomalies 121 and 122, likewise, does not immediately seem to relate to that of features detected in Corner Field. They are c. 14m apart and do not therefore seem likely to be trackside ditches. A similar width separates anomalies 123/124 and 125 and with 121 and 122 may suggest some form of enclosure scheme. Beyond c. 100m south-east from the origin the following 80m show no anomalies suggesting that the strongly registering features in the southern area of Corner Field may not extend to the west to this area.

Considered as a whole there is no obvious continuation of individual anomalies detected in Corner Field in this area nor is the overall form or frequency of features registering in Corner Field apparent in this strip. However, the nature of the anomalies implies that there is some continuation of the landscape organization scheme/s detected in Corner Field extending west of the area of the modern plantation, perhaps an enclosure or in-field system. The density of anomalies is not high. Continuation of geophysical survey into the Home Field+ at some future point may prove instructive in this respect.

3.6 Fieldwalking in Home Field+, Stable Field and adjacent locations

3.6.1 Introduction

Three fields were examined by systematic fieldwalking exercises at various stages of the Project: Corner Field (reported above 3.4.2), Home Field+ to the west of Corner Field and Long Plantation, and Stable Field to the south of Corner Field (Fig. 3.1). In addition, walkover surveys were conducted in Quarry Field west of Mill Close, and in part of the former Barnoldby le Beck Park (Fig. 3.1). These fields form part of the patchwork of fields typical of the area, with broadly straight hedged boundaries and regular form characteristic of Enclosure, subsequent rationalization and tithe arrangements (cf. Willis 2013, section 1.12). The broad regularity of the field shapes assisted the systematic surveys which were via line-walking.

3.6.2 Fieldwalking in Home Field+ in 2010

A systematic fieldwalking exercise was undertaken in Home Field+ in August 2010. This large wedge-shaped field lies to the west and south-west of Corner Field beyond the Long Plantation (Fig. 3.1). Measured from a mid-point along its eastern side to a mid-point on its western side the field is 508m in length and it has an area of 23.1ha. The eastern and central area of the field is essentially a plateau at around 55m OD, with a gentle downward slope to c. 50m to the north and west. To the north the field is bounded by a hedge which runs along the side of the Hatcliffe road and to the east it is open to the track running to the farm buildings at Hatcliffe Top; to the south the field is bounded by a scrub hedge and has a deep ditch which often carries water (this being a canalization for land drainage but was probably once the approximate course of a seasonal spring joining the stream in the next field known as 'James Garth' itself now designated a "Drain"), while the shorter western margin equally has a hedge with one or two scrub trees. Beyond this western point the ground slopes to the south (this being the field known as James Garth), to a small tributary valley of the Waithe. Home Field+ had in the past been divided into three parts. This had been the arrangement in the 19th century through to the late 20th century, with the three fields marked on maps of this time period and still marked on the 1999 OS 1:250000 Explorer map 282. The present amalgamated field was, then, divided across the middle from north-north-west to south-east. The western part was known as '25 Acre Field' in the second half of the 20th century (pers. comm. Mr Stephenson); in the 19th century the 1841 Tithe map records this as 'Great Field' when it was arable land. The eastern field was in the post war period, according to Mr Stephenson (pers. comm.), normally under grass and had no name. The OS map of the 1880s shows some trees in this field, by the track up to Hatcliffe Top farm buildings and others in the centre of the field in a loose alignment north-east to south-west, and indeed they once grew along a subdivision, now no longer extant. The 1841 Tithe map for the Parish of Hatcliffe records these as separated fields of approximately the same size, both, however, known as 'Long Field' and both under pasture; the three fields were owned by the Rev Walker and farmed by Richard Williams, as was Corner Field. More recently, within the south-eastern area of this eastern field a small rectilinear field lay alongside the Hatcliffe Top farm buildings, evidently a secondary subdivision of the larger (eastern) field, set next to the farm buildings for

convenience. The latter was known as 'Home Field' and again was pasture for cows. The amalgamated field is casually referred to as '62 acre' but seemingly has no specific name so it is referred to here as 'Home Field+' for convenience. In 2010 there was no visible trace on the ground that this large field had been three fields in the recent past. On the other hand LiDAR imaging does show a trace of the boundary lines of the former southern manifestation of 'Long Field'. Hatcliffe Top farm buildings are shown on the 1841 Tithe map and were evidently a development related to the Enclosure of the land. Placed on higher land, surrounded by a chequerboard of regular fields and aligned within the broader layout they display classic features for farms on the Wolds of this date. This farm had a small orchard, gardens and a stacking yard, now areas all reassigned to different farm roles.

At the time of the fieldwork season in the later summer of 2010 the grain crop had been harvested from Home Field+ and the field ploughed before mid-August. Conditions were such that there was a reasonable degree of visibility of coarse inclusions and other material in the ploughsoil and so the opportunity was taken to undertake a surface collection exercise at this time. Examination of this field was a Project aim, but whilst the line-walking conducted in Corner Field (cf. Section 3.4.2) had the purpose of gaining information on the distribution of finds across a known archaeological site, the walking in Home Field+ (as with Stable Field) was exploring a field with little known record of archaeological material. Only two records occurred for the area of Home Field+ on the County HER, specifically a flint core from its southern margin (see below), and a note on the observation of an undated "sinuous linear ditch boundary... visible as a cropmark" in the north of the field ((HER 0684/1/0; TA 22860 02020 noted in 2006; this may related to anomalies 122, 123 and 124 detected via magnetometry, cf. 3.5.3). With the line-walking in Home Field+ the intention was to establish whether there was any continuation westwards of the site being examined in Corner Field, or any concentrations of material that might indicate other foci or activity from other periods, or whether there was an absence of material, indicating a margin to the Corner Field site. Fieldwalking might have been delayed until later in the year to permit a greater degree of weathering but recent years have seen only short windows for access between harvest and drilling /and autumn germination of the following crop. There was restricted access in Corner Field at the time (August 2010, as the crop was still standing in that field) and given that sufficient personnel were available it was logical to undertake an exercise of this scale.

Given the size of the field (of which only part had once been known as Great Field) it was decided to adopt a sample strategy of walking ranks of transect lines rather than aim to cover the whole area. Accordingly these ranks were established across the east and west margins and the centre of the field. The traverse lines were 100m in length and set 10m apart (Figs 3.15 and 3.16), this approach following

an established means for systematic detection across ploughed land where the exercise is one of prospection (cf. Fasham *et al.* 1980, 3-6). This was, therefore, a closely similar method to that employed by the University of Sheffield survey that examined a landscape block between Ludborough and Claxby in the mid-1980s, where the spacing was also at 10m (Phillips 1989b, 30). In the case of Home Field+



Fig. 3.15 Fieldwalking in Home Field+ showing the arrangement of the lines walked and the incidence of lithic finds.

the three ranks of transect lines, established using a Totalstation, were separated by two areas each 120m wide which were not walked (Fig. 3.15). The field had an unploughed margin of standing stubble around its perimeter which in general measured c. 7m in width. The lines walked were accordingly set within this margin. Each transect line was individually labelled; lines 1-58 denote those along the eastern side, 101-128 on the western side and lines 129-171 through the centre. A total of 129 lines were walked, a few being foreshortened (i.e. less than 100m) where they met the stubble margin of the field on its southern side. The aggregate distance walked was over 12.5km. If there was any observed concentration in material the option was available to follow this up with an intensive survey; in the event no concentrations were noted during the walking.

Conditions for walking and observation were good. Plough furrows were comparatively shallow, the light over the period of the walking (15-19 August) was good and there was no new crop or remnant of the previous crop obscuring the ground surface. Some previous rain and wind had weathered the surface somewhat. The walkers comprised students and members of the NELALHS, with a mix of experience across the two contingents. Checking the finds recovered against the line walkers there was no apparent bias in trends in recovery.

Only six lithic items were recovered during the 2010 fieldwalking and these date from the Mesolithic to the Bronze Age (see Chapter 5, Table 5.1, items A10-A15 for details). Two items were thought by Dr Bishop to be Mesolithic/Early Neolithic, while a further two were identified as Bronze Age and the remaining two, probably Bronze Age. In addition the North East Lincolnshire Council HER documents a small flint core from the southern margin of the field adjacent to the field known as Little Field (from the 1841 Tithe Map; cf. Fig. 3.3). This item was found by Hugh Winfield in August 2005 (HER 0076/1/0; TA 22929 01546; see Chapter 5, item A9). The find-spot has been added to Fig. 3.15 showing the lithic finds from the systematic walking of the field in 2010. For the area covered the number of lithic finds is very modest; whilst surface conditions were not perfect for observation this is consistent with the pattern of infrequent presence seen too for Stable Field (cf. below) and from the excavations in Corner Field. With such a small sample from Home Field+ no comment is possible on the spatial occurrence. The ratio of lithic finds to metres walked is 1:2091.

Ten sherds of Roman date were recovered during the line walking, together with six medieval sherds and 39 pieces of modern pottery. Turning first to the Roman

sherds these collectively weighed 100g (Fig. 3.16; Table 3.5). Nine are greyware items likely to be from jars, with only one oxidized tableware item; in this respect this small sample reflects in microcosm the composition of the Roman assemblage from Corner Field. These items are abraded and weathered. They are essentially at the point of optimum fragmentation (i.e. the point at which they have become absolutely small and lack any significant curve such that they are unlikely to be broken by any further impacts they would be subjected to in ploughsoil). There has also occurred much loss of original surfaces, as with sherd HR9 from Line 120. The Roman sherds from the fieldwalking in Corner Field have an average weight of 10.4g (cf. Table 3.5) and the equivalent figure for the 304 sherds of pottery from the ploughsoil from the excavation of Trenches A and D within Corner Field is 10.9g. The average weight of 10g for the few sherds from Home Field+ therefore compares closely with the equivalent average weights for the surface collected Roman pottery from Corner Field as well as the mainly Roman pottery from ploughsoil excavation in that field. Clearly these are typical sherds from a topsoil/ploughsoil context in terms of their degree of fragmentation and condition. Abrasion has occurred even though much of this field was pastureland in modern times.

The ten items recovered are listed here in Table 3.5 with some typological details noted. Six of the sherds came from the first rank of 100m walked lines west or south-west of Corner Field (Fig. 3.16). These sherds may be simply 'background noise' but their greater frequency in this part of the field may reflect activity near to the known site of this date in Corner Field. The sherds are in general not closely dateable with the exception of the second century samian sherd, HR9. This item is most likely to be from a Drag. 18/31 dish, though could be from a Drag. 38 (plain bowl). It dates to a period before the main floruit of the site at Corner Field, but coming from an area half a kilometre from that site it may be 'noise' or relate to an earlier separate activity or site further down the valley from the one at Corner Field (noting though that there were 38 Lezoux ware samian sherds forthcoming from the excavations in Corner Field). The ten sherds lack the Late Roman emphasis seen with the material from Corner field: there is no calcite-gritted ware, no Dales ware type rims and no Swanpool items. The ratio of Roman pottery finds to metres walked is 1:1,255, which can be compared to the equivalent average for Corner Field of 1:37m, a striking difference. Overall, it is perhaps surprising that so very few Roman period sherds were recovered in this exercise, of whatever date, suggesting that there is a strong margin to the site in Corner Field and that the area of Home Field+ was

not used for settlement or intensive activity (of a type likely to leave a trace in ploughsoil contexts) and that there was little Roman manuring of the fields from the Corner Field site, or if there was, it contained little in the way of material culture.

The six medieval sherds are not especially diagnostic. Five are abraded and weathered body sherds with no evidence of glaze, although they are somewhat

excoriated. They have oxidized surfaces (pale reddish brown) and are fine quartz grain tempered. A rim, in a better state of preservation, was recovered from Line 121 (HM4). The latter is in a paler fabric with a pale brownish yellowish slip on the rim and interior; this is evidently from a jar (or similar) with a rim diameter of c. 110mm; the rim has a flattish top and projecting bead terminal. The sherds weigh collectively



Fig. 3.16 Fieldwalking in Home Field+ showing the arrangement of the lines walked and the incidence of Roman pottery finds (HR) and oyster shells (HO).

Table 3.5 Roman pottery sherds from fieldwalking in Home Field+.

Line	Find code	Weight (grams)	Sherd type	Fabric and Form
3	HR1	10	Rim	Quartz grain tempered greyware; lid-seated rim with square terminal; from a jar form, cf. Lincoln corpus J107, c. AD 160-400; rim diam. 130mm, RE: 0.09
9	HR2	6	Body	Quartz grain tempered greyware; from the floor of a base, probably a jar form
26	HR3	7	Body	Quartz grain tempered greyware; probably from a jar
26	HR4	13	Rim	Quartz grain and grog tempered greyware; out-turned, almost rolled rim with thickened terminal; from a wide mouthed jar form; rim diam. c. 210mm, RE: 0.06
27	HR5	27	Body	Quartz grain tempered greyware; hand-forming marks on interior but exterior smooth; probably from a jar; abraded
31	HR6	4	Body	Quartz grain and erratic tempered greyware; soapy feel; possibly handmade; possibly early medieval; small, weathered and abraded sherd
55	HR7	11	Rim	Quartz grain and grog tempered greyware; everted rim, with an expanded rather square terminal; from a jar, perhaps a copy of Black Burnished ware forms, c. AD 120-300; rim diam. uncertain, RE: c. 0.035
104	HR8	7	Body	Quartz grain tempered greyware; probably from a jar; abraded
120	HR9	3	Rim	Central Gaulish samian from Lezoux; probably from a Drag. 18/31 dish c. AD 120-150; rim diam. uncertain, RE: c. 0.035; fully excoriated and weathered
140	HR10	12	Body	Quartz grain tempered greyware with slight oxidization of exterior surface; thick wall, from a large vessel, probably a jar

37g giving an average weight of 6.2g (Line 24: 5g; 110: 7g; 114: 9g; 121: 7g; 140: 7g; 166: 2g). As with the Roman era pottery these are typical sherds from a topsoil/ploughsoil context in terms of their degree of fragmentation and condition.

Considering the modern ceramics, there were 39 pottery items (217g) recovered. The average sherd weight is just 5.5g, with on average a sherd of this category being recovered every 325m, emphasizing how few items of modern ceramic are present in the ploughsoil of Home Field+. There were eight examples of stonewares including two fragments in the same specific ware, and almost certainly from the same vessel, evidently a fairly recent factory produced basin or mixing bowl with a light green glaze; these two non-joining sherds were recovered from separate transect lines. The larger fragment at 29g is the heaviest sherd recovered during the walking, which is perhaps in itself a further indicator of how infrequent pottery is amongst the ploughsoil in this large field. Another item in stoneware was the rim of a bottle, whilst a smaller vessel with matt salt glaze is from a small pot likely to have had a wooden stopper. The average sherd weight of these 8 sherds is 9.5g. Modern china tableware comprises mass produced Victorian

and early/mid-20th century examples, essentially white glazed and decorated forms including plates and cups, some with willow-pattern and transfer decoration. The heaviest items are a relatively robust bowl fragment with a comparatively thick pedestal footring (15g) and a handle of later 19th century date (19g) likely to be from a sauceboat or tankard. The average sherd weight of these sherds of modern china is just under 4g (25 sherds, 98g), indicating their advanced state of fragmentation and demonstrating how visible even tiny sherds of this type are against this ploughsoil, with 16 of the 25 sherds at 2g or less. Black glazed ceramics include a base sherd, perhaps from a pitcher, and a smaller fragment that may in fact be from a 'kitchen tile'. A likely flower-pot sherd was recovered with a 'clean' homogeneous light red-paste fabric. Miscellaneous modern items of pottery include a fragment with thick green-brown glaze with a ridge from an item of uncertain form. Other ceramic detritus was equally rare with very few brick, field drain or tile fragments present. A 20th century sewage pipe fragment occurred. There was no clay pipe and virtually no glass present: in sum there was a marked lack of modern rubbish present although it should be recalled that much of this field had been

pasture during the last 200 years so not receiving farmyard manure etc. Some hours were spent scanning Home Field + with metal detectors at the time of the fieldwalking exercise. This was conducted by Stan Little and Alan Daws who reported that there was very little iron present in the ploughsoil. No coins and no significant non-ferrous items were recovered. This overall rarity of medieval, post-medieval and modern era finds might be taken to indicate that the two oyster shell valves recovered (HO1 and HO2) are less likely to be modern or medieval; their actual date remains uncertain and there is a chance they derive from Roman era consumption. The example from Line 30 was found in some proximity to Roman era sherds during this exercise (Fig. 3.16, HO1).

Overall Home Field+ yielded very low numbers of finds for any period. No prehistoric pottery was encountered. Only a very modest number of lithic items were present despite the location of the field on higher (commanding ground) by the opening of the Waithe valley. Similarly there were only ten sherds of Roman pottery, seeming to indicate a low level of 'background noise', with a hint of some focus near the mid-eastern edge of the present field, perhaps significantly, near the south-west corner of Corner Field, but the numbers are tiny. No Anglo-Saxon (early medieval) pottery was found, which is noteworthy given there is some presence in Corner Field. The medieval pottery was more from the western side of the field and this may reflect some nearby occupation, probably in the area that is now a row of residences on the north side of the Hatcliffe road, including The Spinneys and The Old Farm. The former is a comparatively recent construction; the latter has a longer history dating, according to the present owner, from the early 18th century, being part stone built; an older property may have stood at this location. It is referred to as the Old Farm House on the 1880s OS map, having appeared on the 1841 Tithe map. Whether Home Field+ was subject to rig and furrow cultivation during the medieval period is not known but seems likely. The low level of modern finds indicates manuring (particularly in the area of the former '25 Acre Field') may have been limited to farm waste. Unsurprisingly there was somewhat more modern debris in the part of the field that lies adjacent to the current track and farm buildings, despite its use for pasture until recent times.

This prospection exercise showed the ploughsoil in this field to be relatively free of artefactual debris, suggesting that it was not a focus for activities in the past other than likely low impact agricultural use. There might be a case for a repeat of such an exercise with a more weathered surface but as noted the surface

was reasonably weathered even though the walking was undertaken in August; that said, opportunities are rarer than they used to be given the current trends of quick turnaround in field cultivation and the rapid germination of crops sown in late summer or autumn in mild climatic conditions. Moreover, there is no reason to believe that the results from 2010 are other than representative. With the walking in Home Field+ amounting to almost 13km of coverage this was a relatively big team task which yielded some relatively fine detail on the artefact presence.

3.6.3 Fieldwalking in Stable Field in 2015

Stable Field is an approximately rectilinear field which lies to the immediate south of Corner Field (Fig. 3.1). It is used for arable crops, typically being planted with the same crop as Corner Field during the years covered by this Project. It is slightly smaller than Corner Field, measuring 300m by 200m (somewhat shorter on its western side, by c. 50m, particularly from a mid-point southward). The total area of the field is 5.5ha. The field extends from a plateau on its western side at c. 56m OD eastwards, dipping in a somewhat steeper slope from approximately halfway across the field, mirroring the step in Corner Field at a similar point. The drop to the east overall is around 14m as the Wolds edge descends more or less consistently towards the Middle Marsh. It was thought important to undertake a surface survey of the field via systematic fieldwalking to establish whether any cultural or other material was present in the ploughsoil that might indicate past occupation or use of this area, relating to that in Corner Field or otherwise. Aerial photographs show little indication of settlement or other features though some linear anomalies present in the south-western part of Corner Field look to extend into Stable Field to some extent. The 1841 Tithe map for the Parish of Hatcliffe records this field as arable land, when the field went by the name 'Seed Walk'.

In particular such a reconnaissance via fieldwalking would throw light on whether the Roman settlement and Anglo-Saxon activity present in Corner Field extended to the south, and indeed whether there were indicative traces that this higher land (continuing south-east from Corner Field), overlooking the slopes and flats to the Middle Marsh to the east, had been used at other times. In addition Whitwell (1966, 47), repeated by Loughlin and Miller (1979, 166), gave a NGR for the Roman site at Hatcliffe Top as TA 230 020, which places it not within Corner Field, where surface finds are readily evident, and the excavations reported here have taken place, but c. 150-200m to

the south, within Stable Field. Accordingly it was important to carry out systematic survey in Stable Field to establish whether surface finds of Roman date occur in this field, as these publications implied. At the time when the fieldwalking was undertaken the only record on the HER for the field noted “A scraper and several flint flakes found in a discrete area in 2005” on

the southern margin of the field (HER 0645/1/0; TA 23111 01945; see Section 5.2 for fuller details); this find-spot is indicated on Fig. 3.3.

Stable Field is bounded by a hedge to the north, while to the east, where it meets the A18, by a hedge and fence. To the south its margin is defined by a plantation of trees with a grassed skirt that forms



Fig. 3.17 Fieldwalking in Stable Field showing the arrangement of the lines walked and the incidence of lithic finds.



Fig. 3.18 Stable Field at the time of the fieldwalking exercise, looking to the south-east.

a margin to a tarmacked drive from the A18 to Hatcliffe Top farm buildings and domestic dwellings. This plantation dates from the 1960s (pers. comm. Mr Stephenson). In autumn 2015 the southern edge of the cultivation did not reach the tree/grass line, traditionally and cartographically taken as the field margin, by some metres; the southern edge of the field also angles-in to the north at its western end, cutting out a triangle where two houses occur. Accordingly, this narrow zone was excluded from the field-walking survey (see Fig. 3.17). The western margin is defined by a long paddock on its southern side, and north of this the field extends by an off-set step to the west, up to the track linking Hatcliffe Top farm buildings with the road from Hatcliffe village to the A18.

The survey was undertaken in conditions of good visibility on 4th and 5th November 2015 by highly experienced personnel and took the form of line-walking. Line-walking was considered the most apt approach given the work was of a prospective nature (cf. Fasham *et al.* 1980). Fieldwalking had not been undertaken previously for, as with Corner Field, crop harvests had often been in the autumn with little opportunity of access before the following crop was established; hence the chance was taken at this time. The field had been drilled and when surveyed had a flat soil surface; it was already somewhat weathered at the time of walking, following heavy autumn

rains. The autumn sown winter wheat crop was only showing as tiny shoots a few millimetres in length (c 20mm maximum), with a remnant of dried bean stork fragments from the previous crop occurring very sparsely in the soil, which was a dark brown. Light conditions were good. The method followed that employed for the survey of Home Field+, with 100m long lines walked, spaced 10m apart. This shared approach was adopted to assist direct comparison of the results. Given the size of this field two ranks of 100m long transects could be accommodated, 20m apart, with little of the field remaining outside the surveyed area (Fig. 3.17). The western rank lay on the plateau area above the slope to the east, while the eastern of these two ranks followed the slope in the topography as it falls to the east. A total of 36 100m lines were walked. The lines were walked from alternately west to east and east to west, with visual scanning along and to the sides of the line. The ploughsoil in the south-eastern margin of the field was found to have a strong clay component, making this distinct from the more loamy soil of the rest of the field. LiDAR data with a hillshade transformation shows a broad shallow dished depression in this area.

The surface of the field was, like that of Corner Field, found to be essentially free from detritus of the modern era, with a near total absence of modern glass (just one shard) and plastic. Equally there was almost no 18th, 19th or 20th century pottery (one

black-glazed redware sherd was found towards the eastern end of Line 11 and approximately 6 other pieces of modern pottery) and very little modern building material present (no bricks and only very rare small fragments of modern tile). No clay pipe fragments were observed. As with Home Field+ this field had, evidently, not received stockyard manure/farm refuse containing much artefactual material nor other such enrichment containing modern cultural debris. As with other adjacent fields glacial pebbles were present, plus rare glacial cobbles. Unworked local flint and chalk fragments were commonplace. The only archaeologically noteworthy finds were four worked flints. Of these items one is probably Mesolithic/Early Neolithic, two are Bronze Age, and one thought probably Bronze Age (see Catalogue in Chapter 5 below, items A16-A19). All four occur in a distinctive dark grey flint with three coming from the centre of the field on its western side (Lines 10, 12 and 13), that is around the cusp of the plateau area, at c. 55m OD, with a single 'outlier', from the east of the field, near to the A18 from Line 32 (Fig. 3.17). There is no correlation between the distribution of these four items and their chronology.

Overall, therefore, despite the exercise being undertaken by experienced 'eyes' in conditions favourable for the observation and recovery of finds, very little cultural material was recovered. That only four lithic items were recovered reflects the pattern seen with the fieldwalking of Home Field+ (cf. above). There was an absence of prehistoric, Roman, early medieval, medieval or subsequent pottery, and of finds generally. Given this absence of any Roman period items, this seems to indicate that the Roman period site explored in Corner Field was principally focused in that field and that settlement/intense activity does not extend into Stable Field. The pattern is consistent with that indicated by the fieldwalking in Corner Field in 2005 wherein the presence of Roman sherds in the ploughsoil falls away markedly in that field on its southern side (Section 3.4.2 and Fig. 3.4 above). It also confirms that the location recorded by Whitwell and repeated by Loughlin and Miller, probably because they were using the same original record, (cf. above, this section) is indeed erroneously referenced, or more likely imprecise due to it arising from a reference to a general location. The indications from aerial views and the geophysical survey of Corner Field that features extend into Stable Field to some degree on its north-western margin are not matched by surface material. Pottery and other finds are infrequent in the ploughsoil in this adjacent part of Corner Field, and this pattern is reflected south of the present field boundary. It would seem therefore that any features in

this general area (should they exist to any extent) have not produced material that can be readily detected in the modern ploughsoil; the results imply they may have contained little in the way of cultural material. This might be a consequence of their chronology if they are later prehistoric in date; and indeed they may not extend very far into the area now covered by Stable Field. The four flints suggest some use of this higher ground during the Bronze Age, a possibility which the earlier lithic finds from 2005 recorded below (Chapter 5) may in degree support. Given the ratio of metres walked and scanned to finds this was a low level of use as the ratio of lithic finds to metres walked is 1:900.

On various occasions during the fieldwork seasons 2007-2016 Stan Little and Des Pearce conducted sample metal detector scanning in Stable Field. No significant metal finds were recovered. Beyond the tarmaced drive from the A18 to the farm buildings and dwellings at Hatcliffe Top is a further field (to the south) which was unavailable to survey as it is now in use as a paddock.

3.6.4 Walkover Survey in the former Barnoldby Park, on the west bank of the Waithe

A walkover survey was conducted in the field to the east of the A18 opposite Corner Field. This field was formerly parkland, being part of Barnoldby le Beck Park (Fig. 3.1). It had been turned over to arable cultivation in recent times, and was under arable in the first seasons of the work at Hatcliffe Top, as, for instance, in 2007. The field was farmed by Mr Walker but more recently has been used to grow Christmas trees. It slopes consistently to the east from c. 34m OD by the A18 to c. 24m OD by the beck. The Waithe beck lies on its eastern side, as it begins to cross the Middle Marsh, having left the Wolds. The survey was conducted in September. The aim was to establish whether there was any cultural or constructional material visible at the surface of the field, and in particular items contemporary with the site in Corner Field. The walkover was conducted by highly experienced personnel scanning the ground surface, approximating to wide interval informal line-walking. The surface of the field had some limited plant growth at the time but soil visibility was sufficient to provide a representative impression of its content. No cultural or constructional material was observed, other than a few fragments of modern tile, during what was a relatively short episode of surface examination lasting 90 minutes. A noticeable feature of the topsoil in

this field compared to that in Corner Field was the markedly higher incidence of erratic pebbles, cobbles and fragments, a consequence of the heavier deposition of glacial till at this lower margin of the Wolds, which is a phenomenon common to the eastern fringe.

The PAS database records part of an Iron Age coin from this field (NLM-26F023, date of entry 1/7/2014). This item is from the edge of a Corieltauvian silver unit, thought possibly an issue of VEP of c. AD 10-40. Several metal detected items of Roman and Medieval date are logged by the PAS from this field and the Parkland (Sections 2.3.5 and 11.7.2).

3.6.5 Walkover Surveys in Quarry Field

The field opposite Home Field+ to its north-west, on the south side of the Waithe beck, is known now as Quarry Field after the chalk quarry on its eastern

side; it was formerly known as Little Beck Field (Fig. 3.1). It had been anticipated that this field could be systematically walked in the autumn/winter of 2015/2016. However, the field had standing stubble at the times when the fieldwalking could otherwise have taken place. There are some inconsistent reports of several Roman coins having been found in this field, but currently no reliable evidence is available. No finds have been recorded by the PAS. Several walkover surveys by highly experienced personnel, particularly at the eastern end of the field, when the surface of the field was clear of crops and stubble, produced no finds. The dip in the topography of this field to the valley bottom is dramatic, meaning it will have been unsuitable to settlement in the past. The lower slope of its eastern end was taken out of arable use and planted with trees c. 60 years ago because of its unsuitability for tractor cultivation (pers. comm. Roger Stephenson).

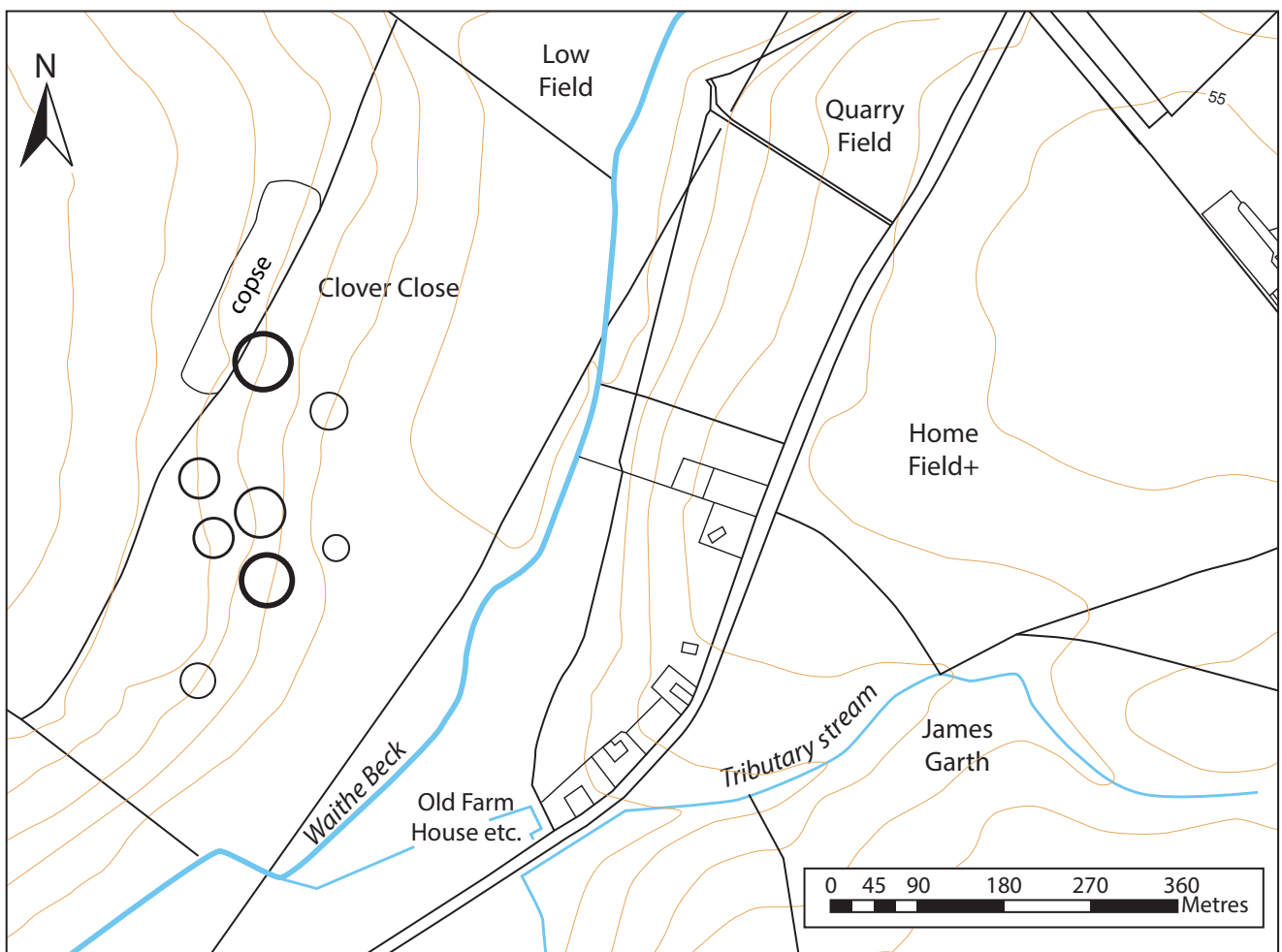


Fig. 3.19 Plot from an air photographic view of part of the field known as 'Clover Close/Little Milkings', from Bing, with possible ring ditches showing as cropmarks highlighted by Chris Blair-Myers (the black circles) and marked as approximately proportionate to cropmark size. The tributary stream is seasonal.

3.7 Air Photographic Examination

The Hatcliffe area has not been subject to intense scrutiny through air reconnaissance programmes and equally there is little in the public domain showing soil or cropmarks. As noted above some cropmarks have been identified in the south-west quarter of Corner Field and extending into Stable Field with one other feature noted by the eastern edge of Home Field+; otherwise little has been identified in the vicinity of Hatcliffe Top. One exception is, however, notable: cropmarks observed in a field, previously pasture (on the Tithe map of 1841) and now arable, in Beelsby parish. The area with the cropmarks was part of a field that had extended further west in 1841 known then as Clover Close and Little Milkings. The more easterly part of this 1841 field is the area with the cropmarks; this area is now joined with a field to the east; on Fig. 3.1 the cropmarks are just to the west of the area marked Clover Close. This site lies on the north bank of the Waithe, immediately above the beck, between Hatcliffe village and Waterdell, opposite The Old Farm and The Spinneys on the Hatcliffe road. In this

field a number of ring ditches can be discerned from an aerial photograph of 2006 and appear to represent a barrow cemetery (I am grateful to Chris Blair-Myers for examining photos of the area and for recognizing these features). The location is around TA 220 015 as the valley rises quite steeply. Whilst the available image is not entirely clear, the complex seems to comprise of eight or more ring ditches, five of moderate size and three larger ones, two with wider ditches, one of which (the most northerly of the group) seemingly extends under the copse of trees bordering the field to the north (Fig. 3.19). The other feature with the wider ring ditch is central within the group and has a diameter of c. 38m so it is possible this is an enclosure monument rather than being a burial. Better aerial images may resolve details of this complex, as would specific survey work at the site. It may be significant that this complex lies opposite the point where the micro-valley running through 'James Garth' (cf. 3.1.1 and 3.6.2) with a tributary stream of the Waithe joins the Waithe, mirroring the location of another round barrow cemetery identified to the east of Thatches (cf. 2.3.3) itself overlooking the confluence point of the Waithe with Thoresway beck by the mouth of Deepdales.

Chapter 4

The Excavations at Hatcliffe Top

Steven Willis

4.1 The Trench Locations

Six trenches were opened at Hatcliffe Top within Corner Field, excavated and recorded between 2007 and 2016. Trench A, in the initial season, was opened over one of the areas that had produced the most

pottery during the systematic fieldwalking. At this time the first tranche of geophysical surveying was undertaken. In August 2008 the second excavation season coincided with a very late harvest and accordingly the opportunity was taken to excavate along the field margin on its northern side where

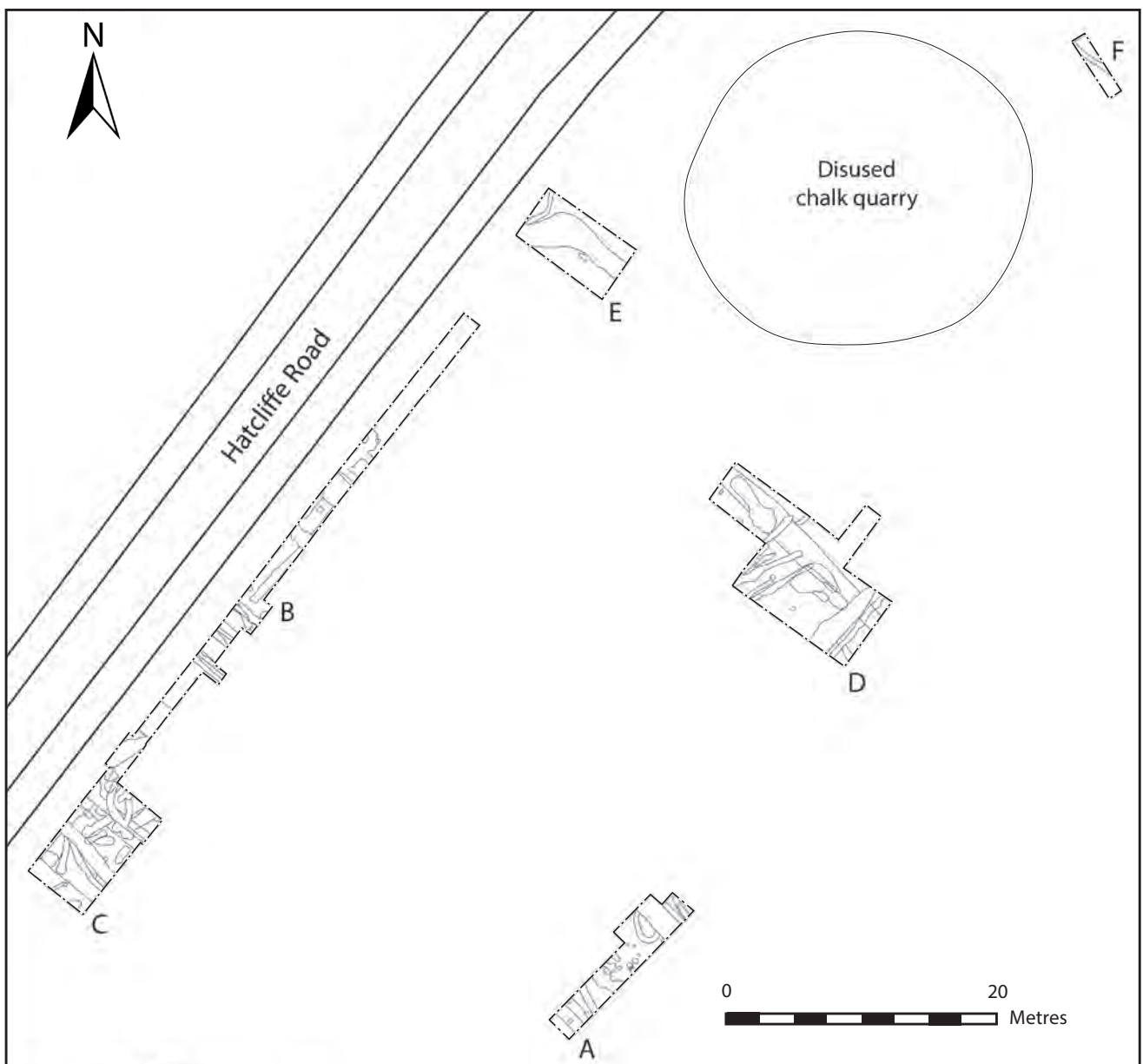


Fig. 4.1 The trench locations.

fieldwalking and geophysical survey had suggested the likelihood of extensive sub-surface archaeology. It was thought that any features and deposits might have been less disturbed along this field edge by the hedgerow; accordingly the eastern parts of Trenches B and C were opened in that year. In 2009 Trench D was opened over an area within the field where the geophysical survey had shown strong anomalies and indicated a potential discrete enclosure. The western part of Trench B was also excavated (west of Ditch [2006]). In the following season there was again a very late harvest meaning the field with its standing crop was not accessible; in consequence Trench C was extended further to the west. In addition, Trenches E and F were opened that summer on the uncultivated land either side of the quarry, with the aim of examining areas thought likely, on the basis of the geophysical and metal detecting surveys, to have extant archaeological remains. Following work at other sites in the area in 2011-12 excavation work was resumed in September 2014 when Trench C was extended at its western end, with some follow-up work at C in November 2015.

4.2 Trench A

Introduction

Trench A was located within the cultivated area of Corner Field towards its northern side, south-west of the former quarry, and some considerable distance from the plantation to the south-west (Fig. 4.1); specifically it was approximately 40m into the field from its north side and 40m south-west of the former quarry. As noted this position was chosen for an exploratory trench on the basis of previous surface finds. Corner Field had been left fallow that year (2007) in line with agricultural policy of the time. Mr Walker ploughed the field just prior to the excavation in order to assist ploughsoil removal. The excavation took place over ten and a half days in late August; the weather was dry and caused no interruptions. During that time Mr Walker disced the ploughsoil in order to facilitate the geophysical and metal-detecting surveys. The trench was opened using hand tools and measured 13.2m in length (south-west to north-east) by 2.1m, with a wider area opened towards the north-eastern end, 1.1m by 4m giving a total opened and examined area of 32m². The ploughsoil (1001) was a dark humic clay loam; it was monitored for finds as it was removed. It was approximately 0.27m thick but since the excavation occurred whilst the ploughsoil was turned with deep furrows this was very undulating.

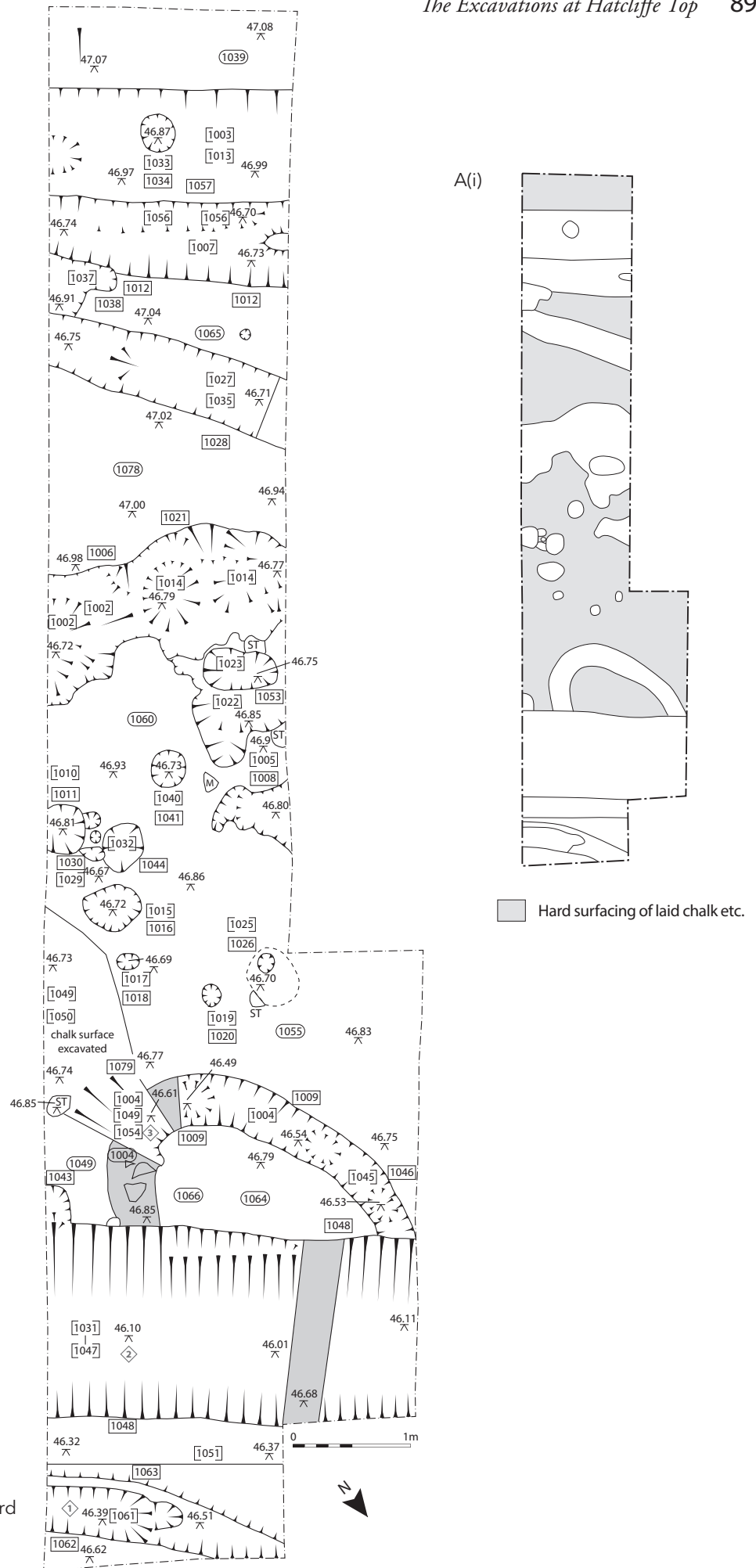
Upon cleaning, following the removal of the ploughsoil, archaeological contexts were found to be present across the whole area of Trench A, cut into the blanket of glacial yellowish brown till over chalk through this part of the field. Ploughsoil finds included 107 sherds of pottery (cf. Section 6.1.5). Roman pottery from the ploughsoil was predominantly grey ware though there were several colour-coated items; a handled grey ware bowl (cf. Darling and Precious 2014, fig. 119 no.1163) and a Swanpool grey ware bowl with fluted and notched flange were present.

Several substantive linear features, together with point features, were identified following cleaning after ploughsoil removal. Apart from the series of ditches and gullies exposed at the north-east end of the trench there were few intersections making grouping and phasing difficult and a matter of feature morphology and content, although the great majority of features cut a laid surface of Roman date which provides a clear horizon with which features were contemporary or later. Rigg and furrow cultivation was observed within Trench A with furrows at either end of the trench. These had cut into the Roman period deposits but nonetheless their presence can be taken as an index of site preservation, (that is, that the site was not so truncated that medieval furrows have themselves been ploughed-out through subsequent cultivation). This cultivation shows on the geophysical survey of the field where the orientation is readily apparent through furrow lines, consistent with the alignment of these excavated features within Trench A (Section 3.5, Fig. 3.12).

Phase 1A

Cut [1079] with Layer (1050)/(1054)

The earliest archaeological feature within Trench A was an arcing gully-like feature partly exposed by the southern baulk, south-west of ditch [1048] (Fig. 4.2). This feature, [1079], was revealed when a section was cut through the later chalk surface (in this part of the trench represented by (1049)/(1055)). Its extent was not established, beyond the fact that it was visible in the side of the ditch cut [1048] (so was at least 1.1m in length). It was approximately 0.8m in width and extended for the length of the opened section. It was c. 0.18m deep with a gentle slope on the outer (south-west) side and a steeper interior profile. It had been cut into the clay till. Its lower fill was a dark silt (1054) up to 0.14m thick, thinner to the south-west. (1054) had the appearance of occupation detritus (Fig. 4.3 no. 1) being very dark, 7.5YR 3/2, almost certainly with a strong soot and/or decayed organic matter content; it was largely free of coarse inclusions. Its extent was



not established. (1054) was darker at its top and this may represent a lens of occupation/surface; below, the deposit was more mixed and mottled with some sand and clay pockets. This deposit extended over the lips of [1079] on either side to underlie the chalk surface (1049)/(1055) as a thin layer over the natural till. This thin layer was discriminated as (1050) and it evidently underlay all the chalk surface east of feature [1021] as it appeared present in the sides of all the features cutting the chalk from this point (see Fig 4.2), for instance, stake hole feature [1026] and scoop [1016]. Finds included pottery, an iron nail and oyster shells (the latter mainly on the very top of [1054]). Collectively 13 sherds of late Roman pottery came from (1050)/(1054) including a mortarium with a reeded flange; other sherds were grey wares, with no calcite tempered pottery present. (1050) produced no animal bone and (1054) only one bone. Notably (1054) also produced a fragment of green glass probably from a thick-walled vessel, though this piece could represent waste (see Glass Catalogue, Item G2). A bulk sample for environmental analysis was collected from (1054).

Discussion

The extent and purpose of the shallow gully [1079] is not clear, but given the section exposed was of a regular form and it was overlain by a layer indicative of activity/occupation it is unlikely this was a natural feature. It most probably served as a drainage feature, removing surface water. The date and nature of the dark soil horizon, indicative of a concerted human presence, is important for the overall understanding of the use of the Hatcliffe Top site in Roman times. The presence of a mortarium with a reeded rim together with the other pottery provides some information for dating as the type should be no earlier than mid-third century, and is more frequent in deposits of fourth century date. The absence of calcite tempered pottery could be chronologically significant, as this fabric family is associated with late Roman Dales ware, but the group is too small for this to be a reliable index. The glass fragment from (1054) is of a colour that most typically occurs in the early to mid-Roman period. A bulk soil sample was collected for environmental analysis. In sum it appears that this earliest phase dates from no earlier than the mid-late third century.

Phase 1B

Surface (1039), (1049), (1055), (1060), (1064), (1065), (1078)

Sealing the layer (1050)/(1054) and extending across

the whole of the trench (except where cut by later features) was a consolidated level surface of rammed chalk with glacial pebbles, cobbles and flint (Fig. 4.2). The surface lay immediately below the modern ploughsoil with nothing archaeological surviving between it and the ploughsoil bar an interface. This surface was better preserved through the middle part of the trench between features [1006] and [1048]. Given that it was cut through by several features it was allocated separate numbers per surviving area. These can be described moving across the trench from south-west to north-east. At the south-west end of the trench this layer was represented by a thin and patchy spread of small cobbles/pebbles and chalk fragments (1039) that had been pressed into the clay till; this material included Roman pottery sherds and although the surface was thinner here seems a certain activity rather than the outcome of a natural sorting process. It extended for just under 0.7m and was cut through on its north-east side by the Furrow [1076]; it had been eroded towards the south corner of the trench (Fig. 4.2). To the north-east of Furrow [1076] and slot [1012]/[1057] was a surviving strip of the surface, numbered (1065), cut to the north-east by slot [1028]. This again comprised of pebbles, small cobbles and chalk fragments in some clay matrix over clay till. This part, though disturbed by ploughing, was more substantive than (1039). Between [1028] and features [1006] and [1021] to the north-east, the surface, (1078), was of similar composition. Beyond features [1006] and [1021] the surface included less flint, becoming almost exclusively chalk (1060). This was markedly so from around 8m north-east from the origin of the trench, from feature [1016]; here the surface (1055) was more or less exclusively chalk, hard-packed, thicker and with a more evidently worn and weathered surface. Below (1055) the dark layer (1050) was evident where features had been cut through the former. (1055) extended to the gully [1009]/[1046] and that part of it in the area of the sectioning (cf. Fig. 4.3 no. 1) was designated (1049) and was equally firmly packed. At this point the chalk surface material was 80-100mm thick. The area of surface enclosed between the arcing gully [1009]/[1046] and the ditch [1048] numbered (1064) was qualitatively similar to (1055). The surface was not traced any further to the north-east within Trench A as beyond [1048] there occurred a series of other linear features which were cut to a depth below the level of this surface and so if it had once extended further in this direction then it had been lost to subsequent activity.

Although there was insufficient opportunity to examine this layer through concerted excavation in this evaluation trench several finds were recovered

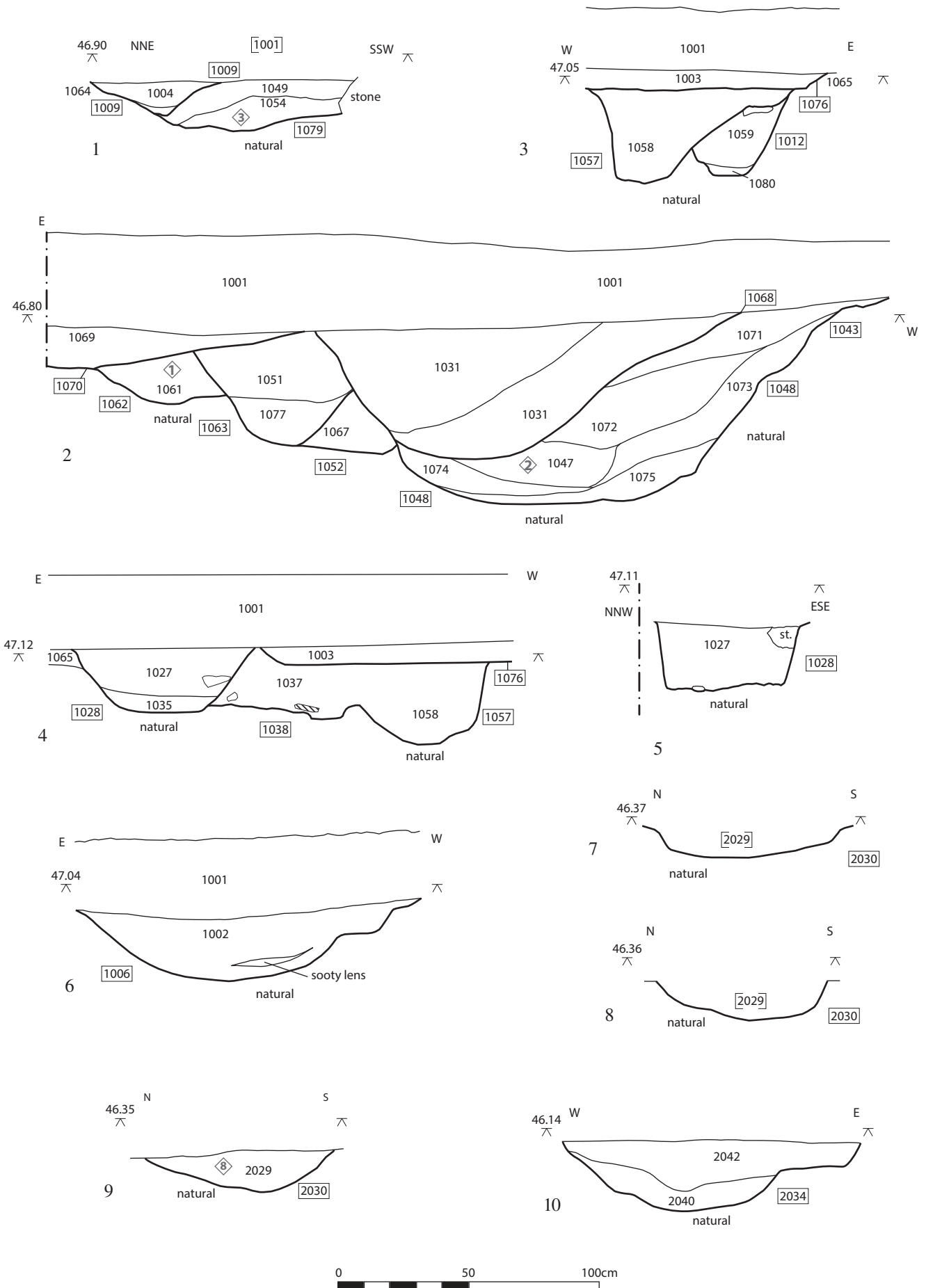


Fig. 4.3 Section drawings and profiles, Trenches A and B.

from this layer. Pottery included only the following items: from (1039) came the flagon neck and rim (Fig. 6.1 no.14) and a single sherd from (1049). The flagon spout appeared an original incorporation into the surface although it may possibly have been trampled in during the life of the surface; the latter though seems unlikely as it was intact at the time of discovery. From (1060) came the stone mixing bowl RF 9, which had probably been placed inverted when the surface was laid. (1049) produced a group of c. 22 oyster shells. There were no finds recovered from (1055), (1064), (1065) and (1078). There were no finds from (1060) bar the stone bowl.

Discussion

This layer is a significant element of the site record as it was one of the few surviving horizontal contexts encountered during the excavations and had sealed an earlier layer. This shows that intensive arable cultivation, recent and past, had not had a fully denuding impact on archaeological horizons. This raises the question as to whether any build-up of archaeological deposits over this surface has been lost; the likely answer would be yes, but is unknowable. Conceivably the activities that generated the cultural layer below the surface continued following the institution of the hard surfacing, and that was the reason why it was laid. The layer extended beyond the limits of excavation to the north, south and west, and possibly the east. It thereby extended at minimum 10.3m by 3.1m. Clearly a deliberately laid layer, this was presumably created to provide a solid surface over the clay till/occupation layer over the till, which otherwise will have been inconveniently, if not dangerously, slippery when wet. It also appears to have been employed to level the natural slope, which dips to the east, in so far as it was several centimetres thicker towards its north-east side, where the ground level dips. The levels taken from the extant surface indicate a 4% dip from south-west to north-east (40cm maximum over 1000cm) which reflects the trend of the topography. The surface may have lost its upper part due to denudation by ploughing, but this or its extent is not known. Given the extent of the surface and the fact that there were no certain structural features with which it could be certainly associated this was likely to have been serving an exterior need for a solid reliable surface for humans, animals and perhaps wheeled traffic. No ruts were observed. David Robinson made the observation that this surface reminded him of former crew yard surfacing on Wolds farms in East Yorkshire from the days of his youth. A similar compacted chalk and flint

surface laid to cover a soil horizon with glacial till component was encountered at the Nettleton/Rothwell roadside settlement site where this lay on the exterior of the Roman stone-founded building in Trench B (Willis 2013, 3.3.2). The chalk may well have come from adjacent contemporary ditches around the site, practically spread and compacted.

The surface may have extended to a boundary or edge marked by the earliest linear boundary features of the series of cuts at the north-east end of Trench A, namely [1052] or [1062], which may have been instituted at this time. Given that the chalk surface was not excavated the extent of the dark layer (1050)/(1054) representing activity/occupation sealed by that surface remains unknown. Likewise, whether there were features underneath the chalk surface or that layer, belonging to an earlier phase, is uncertain, although nothing was observed in the sides of the cut features excavated at Trench A bar the traces of layer (1050)/(1054).

This surface sealed a layer containing a mortarium no earlier than middle third century, and the surface itself dates from no earlier than the late third century. Hence the earliest contexts at Trench A could be later than the earliest ditches encountered in Trenches D and E, yet they could readily be contemporary.

Phase 2

Small Scoops and an Arc of Stake Holes cutting the Phase 1B Surface

A number of point features were present between the cluster of broad scoops represented by [1006] etc. and the arcing gully [1009]/[1046]. These features lay directly below the ploughsoil and were cut through the chalk surface (1039)/(1060) etc. (Phase 1B). These features comprised five stake-hole type features, which taken collectively can be seen to form a u-shaped arc, and three broad shallow scoops two of which may be the result of erosion of the chalk surface, whilst the third is evidently a deliberate feature. The scoops were present on the south side of the trench overlapping with the arc of stake holes. The following narrative describes the scoop features, and then the arc of stake holes, moving broadly south-west to north-east (see Fig. 4.2).

Shallow Scoops

A shallow scoop-like cut [1044] lay to the east of [1006] and the stake hole [1041]. This feature was somewhat irregular and sub-circular in plan, measuring c. 0.36m by c. 0.36m and just 65mm deep. The fill (1032) was a reddish brown loamy silt 5YR 5/2 containing a small Roman pottery sherd and a fragment of bone.

[1044] intersected with cut [1030]. Immediately south of [1030] was a second shallow feature [1011], which continued beyond the excavation into the southern baulk. Within the trench it measured 0.4m by 0.3m and was 0.085m deep. Its fill (1010) was again a very dark brown loamy silt but with distinctive flecks of burnt clay; it yielded two fragments of animal bone. [1016] was the third scoop in this area and lay approximately 0.1m to the north-east of [1044]. This feature was broadly oval in plan 0.47m by 0.4m, to a depth of 0.12m, cut through the surface (1060) etc. to the natural clay. It had regular sides and a flat bottom. Its fill (1015) was again a brown loamy silt with burnt clay flecks as per (1010) which lay close-by. The only find from (1015) was a sherd of samian ware, probably residual.

Arc of Stake Holes

Five apparent stake holes, collectively u-shaped in plan, occurred in this mid-trench area and seem likely to have been parts of the same structure. These are described moving around the arc with the western most feature described first. Feature [1041], by [1008] and [1053], was near circular in plan, with a diameter of 0.3m. It had been cut through the surface (1060) etc. and was 0.2m deep, with steep tapering edges and a flat base. Its fill (1040) was a dark brown loamy silt 5YR 3/2. A jaw fragment was recovered from this fill. Feature [1030], to the south of [1041], was a vertical cut 0.24m by 0.14m, again to a depth of 0.2m, cut through the surface (1060) and reaching natural. Its fill (1029) was a dark greyish brown loamy silt, 10YR 3/2-4/3, which yielded one rim sherd of Roman pottery. East of scoop [1016] was a further small cut [1018], broadly conical, 0.21m by 0.14m in plan, 0.17m in depth as measured from the top of the chalk surface (1060). This feature was filled with a dark silty loam (1017) containing no finds. A closely similar feature to [1018] in scale lay c. 0.58m to the north, being [1020]. This was sub-circular in plan 0.18m by 0.16m and cut to a surviving depth of 0.13m. This was conical in form with tapering sides; its fill (1019) was a dark silty loam with no finds being present. Some 0.4m north-west of this feature was another discrete cut [1026], being circular in plan 0.16m by 0.13m and cut to a depth of 0.17m. The fill of [1026] was a dark silty loam (1025) and contained a Roman pottery sherd and another that may be prehistoric, plus two items of animal bone. The chalk surface (1060) was disturbed around this feature, particularly to its north side, which may have been an associated scoop rather than a patch of erosion.

Discussion

The shallow scoops [1011], [1016] and [1044] form a cluster but their spatial proximity excepted may not represent related activity; the stake hole [1030] lay approximately between the three but it is difficult to see these features as associated. Of the three scoops the cut [1016] was the more substantive feature and might well be the lower part of a post setting, for given its scale it would appear to have been a deliberate cutting activity. The shallow nature of [1011] and [1044] raises the possibility that, as with [1008], they simply represent erosion of the surface (1060) which then filled with broadly contemporary adjacent soils. These three scoops lay immediately below the ploughsoil so there was no sealing layer; the few finds from their qualitatively similar fills are not chronologically helpful either and may well be residual. Flecks of burnt clay came from the fills of two of the scoops (as with the fill of [1008]) and this may be fragmentary debris from the operation of the adjacent flues to the south-west in this trench. The dark soil fills would be consistent too with silts containing a proportion of soot. This suggests the possibility that these features filled at the time the flues/dryers were in use (approximately in the fourth century) or after.

Point features [1041], [1030], [1018], [1020] and [1026] appear to be related cuts given their similar dimensions and the implicit coherent arrangement. Their extant depths were closely similar (at 13, 17, 17, 20 and 20cms) as were their sizes in plan. Given their morphology they would appear to be stake holes, the bases of driven posts. Possibly patches of the chalk and stone surface were removed to ease the entry of the posts which, having passed the surface, would then enter the less resistant natural clay below. Their soil fills were all characteristically similar.

A relationship between the stake holes cannot be proven as they are independent features that whilst all cutting the chalk surface of Phase 1B have no stratigraphically later link, all being located immediately below the modern ploughsoil. The few finds present are insufficient to date them and whilst including Roman items these may be residual pieces used for packing or items that entered the feature after the removal or decay of the post. Presuming the features are related they formed a u-shape (presuming that there are not further related features beyond the northern limit of the excavation and that [1053] was not associated) which was c. 1.8m across at the mouth of the 'U' and 1.2m deep. Conceivably this formed a small structure, screened or fenced area, or pen. This structure was possibly contemporary with the chalk/stone surface, though may have been a later manifestation.

Gully [1009]/[1046]

To the north-east of the arc of stake holes and cut by the major ditch [1048] to both its north and south was a C-shaped gully [1009]/[1046] (Figs 4.2 and 4.3 no. 1). This was clearly later than the chalk surface (hereabouts recorded as (1055)/((1064)). The gully was extant for a curving length of c. 3.7m being somewhat broader and shallower at its southern part where it was approximately 0.4m in width and cut to a surviving depth of 0.13m; its deeper northern section was 0.3m in width and c. 0.23m in depth. It had regular sloping sides with a generally pronounced u-shaped profile, though its base was not even throughout; three lower scooped lengths, though not tightly defined, measuring c. 0.3m in length and c. 60-70mm deeper than the base of the gully were recorded, one near the drawn section to the south and two close-by each other towards the northern end. Above a thin lower fill of clay-silt wash its main fill (1004)/(1045) was a very dark brown-black silty loam 10YR 4/1 (not as soot rich as (1054) which lay below it and the chalk surface). This fill contained occasional cobbles, with, equally unusually, similarly sized large tabular flint fragments present, up to 160mm. Finds from (1004)/(1045) were relatively prolific. These included two iron nails, oyster shells, 91 sherds of pottery (including Dales ware and Late Roman grey wares) and a small quantity of animal bone including teeth, a cattle horn core, a fragment from a second horn core and a rib.

Discussion

This feature had an unusual shape in plan and whilst it was only partially extant it is difficult to see this as a drainage feature as it loops round tightly with a 'diameter', as it survives, of 1.8m. The gully [1079] likely to have had a drainage function (cf. above) lay below it but these features were separated by the layer (1054) and surface (1049) so no continuity exists and besides the nature and alignment of [1079] was not fully established, so there is no direct connection. On the other hand it may be significant that the scale of [1009]/[1046] is similar to that of the arc of stake holes just 0.6m to the south-west. The lower scoops along the base of the gully, cut into the natural clay till, might conceivably be post or stake positions for though lacking clear definition their morphology is sufficient to suggest this possibility, in which case the cobbles and flint block fragments, a distinctive characteristic of the fill of this feature, might represent post-packing. Hence [1009]/[1046] may be a feature of similar nature and function to the arcing stake hole feature detailed above, with which it could be

contemporary, or earlier or later, though both cut the laid chalk surface and any activities associated with these features would have benefited from the sure-footing it provided. The range and unusually high frequency of finds from this feature point to relatively intense use of this area and are also consistent with the picture coming from the finds in the later boundary ditch sequence of [1048] etc. suggesting this was an area of heavy/sustained activity. It may be significant that the animal bone finds from gully [1009]/[1046] were not dissimilar from those from the fills of the flues at the south-west end of this trench.

Table 4.1 The Sequence at Trench A with approximate dates

Phase	Context/Feature/ Feature Group	Approximate Date
Phase 1A	Dark sooty layer (1050)/(1054)	Later third century
Phase 1B	Chalk surfacing (1039) etc.	Late third to early fourth century
Phase 2	Three shallow scoops	Fourth century
Phase 2	Arc of stake holes	Fourth century
Phase 1 or 2A	'Earlier' ditches [1052], [1062] & [1063]	Fourth century
Phase 2A	Arcing gully [1009]/[1046]	Fourth century
Phase 2B	Ditch [1048]	Late fourth, possibly early fifth century
Phase 2C	Ditch [1068]	Late fourth, possibly early fifth century
Phase 2	Oven/dryer flues [1012], [1028] & [1057]	Fourth century with Saxon upper fillings
Phase 2 or 3	Broad Scoops	Roman and Saxon?
Phase 4	Furrows [1070] & [1076]	Medieval

The Boundary Ditch Sequence **Ditch [1052]**

The earliest ditch of the sequence of linear cuts at the north-east end of the trench was [1052] (Figs 4.2 and 4.3 no. 2). Only a remnant of this feature survived as it had been cut to the north-east by the linear cut [1063] and to the south-west by [1048] and [1068]. [1052] was traceable for 2m within the trench aligned, as with the other ditches at this location, south-east to north-west. Its maximum surviving width was near its flat base and measured 0.36m. Its maximum surviving height was c. 0.24m while its base was c. 0.47 m below the base of the ploughsoil. It had been cut into the chalk bedrock

and had presumably had a u-shaped profile. Its fill (1067) comprised a dark silt 7.5YR 4/3 with pockets of clay, presumably from the glacial till. It was largely free of coarse inclusions and no finds were recovered.

Ditch [1062]

This second linear cut – either a shallow ditch or gully – lying close to the north-east baulk, was also apparently early in this sequence of linear cuts, possibly earlier than [1052]. Around 1.2m of this feature was excavated as it either terminated in a rounded butt-end within the trench or shallowed such as to be fully truncated by Furrow [1070] (Fig. 4.2). Its relationship with the ditch cut to its south-west was not entirely clear as their upper fills appeared identical although the nature of coarse inclusions and their angle of dip suggested that [1062] was cut by [1063] (Fig. 4.3 no. 2). Assuming this was so the surviving width of this feature at maximum was 0.45m and maximum surviving depth c. 0.2m. It was of apparent broad u-shaped profile. It was truncated above and to the north-east by the medieval Furrow [1070]. Its lower fill (1061) was a distinctive dark brown silt with a greenish/olive tinge 10YR 3/3. (1061) yielded a sherd of Roman pottery, 19 items of animal bone, a nail and a fragment of colourless glass from a thin-walled vessel of early to mid-Roman date (see Glass Catalogue, Item G3). A bulk soil sample was collected from deposit (1061); amongst other items this contained traces of coal, an iron hobnail, and bones from rodents including the house mouse.

Ditch [1063]

Between [1062] and [1052] was ditch [1063] (Fig. 4.3 no. 2). This feature had been cut to a similar level as [1052] so may have been a re-cut. Its profile was u-shaped, with a flat base c. 0.43m below the base of the ploughsoil. The upper fill of [1063] was context (1051) which, as noted above, appeared identical to the fill of the linear [1062] to its north-east. There were tentative indications from the angle of coarse inclusions that [1063] cut [1062] and taking that as so it survived to a maximum width of c. 0.5m, while originally it would have been at least 0.75m in width at the top of the cut. The lower fill of [1063] was a greyish brown silt 10YR 4/4 (1077); (1051) was a darker silt 10YR 4/3 with charcoal flecking but otherwise with generally few inclusions. Lower fill (1077) contained no finds; (1051) produced 32 sherds of mixed Roman pottery and 96 items of animal bone. The Roman pottery sherds were small and it is likely many of these are residual items. Four iron nails were recovered from (1051).

Ditch [1048]

Ditch [1048] was the largest of the linear features exposed at the north-east end of Trench A; 3m of its length were examined within Trench A (Figs 4.2 and 4.3 no. 2). It cut the earlier ditch represented by cut [1052] and fill (1067) on its north-east side and was deeper than that feature and cut chalk bedrock. [1048] was around 2m in width and crossed the trench in a south-east to north-west alignment. It was around 0.67m deep, below the current top of the natural and of u-shaped profile. It had been recut on its north-east side, this redefinition being [1068]. Six fill contexts could be discerned. The earliest fill was a compact silt with clay (1075), dark greyish brown 10YR 4/2, which extended across the base of the cut. Above this, particularly on the north-east side of the cut was a relatively thin layer (1074), again silt with clay, but a lighter yellowish brown 10YR 5/4, with chalk flecking and small chalk inclusions. On the south-western edge of the feature was a darker silt layer (1073) 10YR 3/1. A lower thick fill in the centre of the feature was (1047), a somewhat mixed deposit, mid-greyish brown. Above this and extant to a depth of c. 0.22m on the south-west side of the ditch was a dark silt with comparatively few chalk inclusions, (1072). This fill and (1047) below it and (1071) above had been cut by the restatement of the ditch [1068]. The top fill (1071), perhaps eroded on its north-east side, was another dark silt but with more chalk flecks. Context (1047) produced 30 sherds of Roman pottery, mainly small sherds of grey ware but with at least two Dales ware jars represented, confirming a Late Roman date. Animal bone from this context amounted to 19 items including a shoulder blade and a complete long bone. A chisel end was recovered from (1047) RF 11. One hobnail, an iron nail and a small lead ingot/bar were also present in this context. A bulk soil sample for environmental analysis was also collected from (1047).

Ditch [1068]

[1048] had been recut by a ditch on the same alignment though of somewhat smaller proportions, [1068], exposed for a length of 3m within the trench. This feature was u-shaped in profile, approximately 1.55m in width and cut to a depth of 0.5m below the current base of the ploughsoil (Fig. 4.3 no. 2). This feature had more mixed brown silt fills than some of the darker fills of its predecessor. Its lower fill was a mid-greyish brown, lighter than (1047) over which it sat, 10YR 5/3, while its upper fill was a similar deposit, 10YR 4/4, with more chalk flecks and fragments. These two fills were excavated as (1031). The later

contained 92 sherds of Roman pottery including a Dales ware form rim and a Swanpool copy of a Drag. 38 flanged bowl, 191 items of animal bone, a fragment of Late Roman vessel glass (see Glass Catalogue, Item G1) and coal. The animal bone included shoulder blades and ribs, as well as teeth and jaw bones, foot bones and a cattle horn core. Context (1031) also produced a FEL TEMP REPARATIO copy dated to c. AD 355-365, a part of a Late Roman buckle RF 3, and a hone in fine grained New Red Sandstone (probably Sherwood Sandstone). Five hobnails came from (1031) as well as four iron nails.

Discussion

The linear cuts described above evidently represent an important and long-lived boundary feature within the site morphology. The results of the geophysical survey indicate that this boundary ditch defines the south-western side of a trackway through the centre of the site, with enclosures arranged on either side (Fig. 3.12). Of the earliest two manifestations of this boundary cut [1052] was vestigial and produced no dating evidence while the cut on the north-eastern side [1062] was shallow and truncated, though its fill (1061) did produce Roman pottery and glass; however, it cannot be closely dated from these pieces beyond a fourth century bracket. The lower fill of the third institution of this ditch [1063], fill (1077), yielded no finds either. Hence there is no precise evidence as to when this major organizing feature of the site was instituted and was first filling, though a Roman origin can hardly be doubted. The geophysical survey suggests that this ditch feature loops round in a D-shape to the south-east and the return heads back north-west to potentially continue through to Trench E with the ditches found in that Trench relating to or contemporary this feature group; however, that is not proven as there is no direct link. This possibility, however, raises the prospect that this boundary at Trench A was part of an original laying out of the site in the later mid-Roman period and through re-cutting essentially drifted to the west. The gully [1009]/[1046] which had Late Roman pottery in its fill was cut by [1048] which means that this linear feature is even later, a probability borne out by the pottery finds from [1048] and the subsequent [1068]. Overall with this ditch sequence there are typologically few finds necessarily mid-Roman (and they may themselves be curated items, such as the glass, in use till the later Roman period). The pottery from fill (1051) of the third cut in the sequence, cut [1063], comprised 32 sherds though these have a residual character with only three rims present. Finds from the latest two

manifestations of this boundary, cuts [1048] and [1068], are clearly 'final Roman'. Chronology aside, a feature common to several fills within the cuts of this feature group, namely (1061), (1051), (1047) and (1031), is the comparatively wide range of finds present. This seems likely to reflect their proximity to areas of activity, movement and perhaps occupation, also seen with the earliest deposits of Phase 1A in this trench. The ditch fillings evidently 'captured' the detritus of nearby processes and activity use, some at least perhaps related to the chalk surfacing and to occupation. Section 11.5 below considers the volumetric data for these finds groups.

Flues on the south-west side of the Trench Oven Flue [1012]

At c. 2m in from the south-western terminal of Trench A was a straight slot-like cut [1012] which crossed the trench perpendicular to the long axis of the trench (Fig. 4.2). This feature will have been approximately 0.4-0.5m in width, though it was cut by [1057], on a similar alignment, resulting in the removal of the upper part of the south-west side of [1012] as well as the top of the feature. It had been cut into the natural clay and reached the level of the underlying chalk, extant to a depth of c. 0.3m (Fig. 4.3 no. 3). It was a deep regular u-shape. Its extant edge on the north-east side was steep-sided. This side and parts of the base of the cut where the natural clay had been exposed to heat were reddened or chestnut brown. The lowest fill of [1012] was a thin layer of silt mixed with clay, presumably representing erosion from the sides (1080). The main fill of [1012] was a very dark brown silt with some flecks of burnt clay and fired clay fragments, with charcoal flecking (1059). Its dark colour evidently reflected a high soot/charcoal content.

Oven Flue [1057]

As noted above [1057] cut the flue [1012] on its south-west side (Fig. 4.2) and this too was a flue. [1057] was located 2m in from the south-western terminal of Trench A; it was likewise a straight slot-like cut bisecting Trench A at a right-angle, almost on the same alignment as [1012]. It was slightly deeper than [1012] with a near vertical side along the south-western edge where it cut the natural clay. The opposite side was a more angled slope (Fig. 4.3 no. 3) which seems to be explained by the collapse or erosion of this side given its soft silty nature (being the fill of the earlier slot); indeed, it is likely this was lined with clay that had subsequently fallen away from the side as it was not well adhered to the silt (1059). It

is likely therefore that it had been of a similar width to [1012], at c. 0.4m. [1057] was 0.35m deep with a channel-like base; its upper level had been truncated by the Furrow [1076] and clearly the feature had been at least 0.43m deep originally. The fill of this flue was a dark olive brown (5Y 3/2) silt with clay (1058) with flecks and small fragments of red fired clay together with charcoal flecks. The clay component of this fill included unfired material, though the edges and base of the flue showed areas of reddening through heating, particularly at the southern end within Trench A. Perhaps derived from the top fills of this flue or [1012] came the group of pottery including likely Dales ware in context (1007). Fragments of fired structural clay were present within [1012]/[1057] but it was not possible to allocate them to one of these two features precisely given their close intersection and the similar nature of the fills, so they could be from one or both features, and possibly from [1012] but residual within [1057]. A total of approximately 56 solid fragments of red fired clay were collected (852g) together with some crumbly fired clay with a soil element (686g). The larger of these fragments had finished surfaces, some rough, some having been smoothed; three fragments had twig stem impressions visible in the broken interior, indicating that in these instances the clay had been applied to a wooden (withy) frame. A small amount of fuel ash slag was present, while a carbonized twig fragment, probably representative of many others long since decomposed, was collected. Some carbonized grains were also recovered from a soil sample collected from around this structural clay. Whilst these items could be from the fill of either flue they nonetheless add weight to the interpretation of these features as drying ovens. The carbonized items comprised two emmer or spelt wheat grains, a possible barley grain, cereal grain fragments and a flax (*Linum usitatissimum*) seed (identifications John Giorgi).

Feature [1038] (likely stoking-pit)

At the southern end of [1057] the flue opened out to become a broader feature [1038]. This cut [1038] was only present on the north-east side of [1057] and somewhat irregular in plan. The part exposed within A was c. 0.56m by 0.5m and 0.23m deep. The top of the feature was truncated by the Furrow [1076]. Given there was no cut relationship visible between [1057] and [1038] and their fills were essentially of the same appearance the probability is that they were contemporary features (Figs 4.2 and Fig. 4.3 no. 4). The fill of [1038], (1037), was a dark silt containing no finds.

Oven Flue [1028]

A little to the north-east of flues [1012] and [1057] was a further channel-like feature [1028] of similar character, evidently another flue channel (Fig. 4.2). This feature was on a slightly differing alignment, approximately north-south. As with the other two flues it extended beyond the northern limit of excavation. Its southern end intersected with the probable stoking-pit [1038] which it evidently cut (Fig. 4.3 no. 4). Approximately 2.2m of this feature was caught within Trench A; it measured c. 0.56m in width and was c. 0.25m deep, having near vertical sides and a flat base, not cut quite to the same depth as [1038] (Figs 4.3 nos. 4 and 5). Its lower fill was a loamy silt with clay (1035), a medium reddish brown 5YR 3/4, with charcoal flecks. This became thicker (deeper) towards the south end of the exposed feature. Its main fill (1027) was a similar deposit to (1059), a dark brown silt 10YR 3/3; this contained charcoal flecks and distinctive flecks of burnt clay together with several large cobbles and fragments which may have been related to a superstructure. Both fills yielded pottery and animal bone. One Roman sherd came from the lower fill (1035), but the eighteen sherds of pottery from (1027) included both Roman pottery (such as a lid-seated jar) together with Middle Saxon pottery suggesting that the upper part of this feature collapsed or was open in the post-Roman period (cf. 6.2). A small fragment of worked bone RF 10 came from (1027). Five small fragments of fired clay came from these two fills.

Post Hole [1034]

Some 0.4m south-west of [1057], mid-trench, a likely post hole base was encountered, cut into natural. [1034] was sub-circular in plan, measuring 0.32m by 0.3m and survived to a depth of 0.11m (Fig. 4.2). It had steep sides and a flat base. The upper part of this feature had been truncated by the Furrow [1076] and so it is not possible to establish whether this feature was earlier or later than the chalk surface; an association with the flues to the north-east is possible. The fill, (1033) comprised a greenish brown friable silt with charcoal flecks; it produced two sherds of Roman pottery.

Discussion

Features [1012], [1028] and [1057] were evidently flues from ovens/corn dryers and show a use of the area for this activity over a period of time. The near vertical sides of the features had preserved well. The deep u-shaped profiles had been preserved partly through

having been cut into stiff clay but in addition, in places, had been baked during firing. These cuts were not weathered, consistent with the probability they had not been open to the elements, presumably as they were not particularly long-lived features, had been covered by an oven/dryer structure and filled soon after the end of their use. [1057] was evidently a replacement or successor phase for [1012]. The form and dimensions of these features is closely similar to that of examples from Trench C particularly feature [3511].

The structural clay recovered from [1012]/[1057] seems likely to be from the superstructure of the dryers and flue lining where the temperature had reached a height sufficient to fire the clay; twig impressions are likely to be from frame-working. Although no ash layer was present at the base of these flues (in contrast to some other cases of ovens/dryers at this site) further indication of the use of these two flues comes from the cereal grain remains recovered from (1058)/(1059). Any ash or soot in the flue may have been incorporated into the adjacent soil through bioturbation or similar processes.

Within the confines of this evaluation trench the stoking pits were not revealed although it is likely that part of one is represented by feature [1038]. It was anticipated that this area would be extended with further contiguous excavation in subsequent seasons enabling more information to be collected, but that proved not to be the case due to lack of availability as a result of cropping circumstances. It is unlikely the flues extended much beyond the limit of excavation. Features [1012] and [1057] may have had the same stoking-pit or a stoking-pit at the same location with the butt ends of their flues to the north; the orientation of [1028] is not certain though again it may have had a stoking-pit in the same location as the other two flues, though it was later than they were. The magnetometer survey indicates anomalies either side of the trench at this south-west end consistent with readings elsewhere in the field where subsequent excavation revealed corn drying ovens, as with Trench D.

Pottery and animal bone within the fill of Furrow [1076] was mainly concentrated over the top of [1012] and [1057] and was allocated the number (1007). These finds probably derived from their upper filling. Much of this pottery proved to be Middle Saxon (cf. Section 6.2). From (1007) came a large cattle jaw and a cattle jaw from a sub-adult, teeth, bird bones and two partial horn cores from caprines and a shoulder blade. A mixed group of 52 items of bone came from (1027), the main fill of [1028], again including bird bone, a cattle horn core, a caprine jaw and a small shoulder blade and these finds probably represent (residual?) Roman and Middle Saxon consumption, while a cattle

jaw came from the lower fill (1035) of likely Roman date. Between the flues [1012]/[1057] and [1028] a disturbed layer (1036), below the ploughsoil and over (1065), was probably associated with the period of construction and use of these flue features; this produced a small number of animal bones and Roman pottery sherds.

Phase 2 or 3

Concentration of Broad Scoop-like features

Near the middle of the trench a concentration of scoop-like features was revealed immediately below the ploughsoil which cut the surface (1060)/(1078) etc. (Fig. 4.2). These features formed a contiguous irregular band across the width of the trench. The points of intersection of these features were shallow (a matter of a few centimetres) and no cut relationships were observed and these features could therefore be contemporary.

On the southern side of the trench the scoop [1006] was partly exposed prior to disappearing into the southern baulk. This feature, as exposed, measured 1.1m by 0.65m and was c. 0.25m deep. It had generally regular edges descending to form a shallow bowl-shaped cut into the natural clay (Fig. 4.3 no. 6). Its fill (1002) was a uniform brown friable silt 7.5YR 4/2, apart from the inclusion of a sooty lens. Three items of animal bone were recovered from (1002).

Immediately north of [1006] and contiguous with this scoop, was a pair of shallow scoop features [1021]. These were fairly regular but shallower than [1006] surviving to a depth of c. 0.18m at maximum below the base of the ploughsoil. [1021] measured c. 1.3m by c. 0.9m in plan (Fig. 4.2). Of the scoops, one of these, adjacent to [1006], was of regular dished form and the other, towards the northern baulk was more irregular. The fill of the scoops was a uniform dark brown silt (1014) with much more in the way of coarse inclusions present than with (1002), including chalk fragments in moderate frequency. This yielded 33 items of animal bone and five sherds of pottery, including a lugged rim sherd from a Saxon hanging bowl of early to mid-8th century date (Section 6.2.4). A piece of lead (L121) was also present, appearing to be an item of 'run'.

To the north-east of [1021] was a further scoop [1053] which again was contiguous with [1021] (Fig. 4.2). This feature measured c. 1m by 0.8m. The upper level of [1053] was essentially a shallow shelf cut through the surface (1060) to its north-east c. 60mm in depth, which continued beyond the northern limit of excavation. On its western side the feature had a deeper regular cut of elongated form, 0.6m by 0.3m and 0.16m in depth (below the base of the ploughsoil). The fill

of this feature (1023) was characteristically similar to (1014). It contained only three fragments of bone and a tiny rim fragment of Roman pottery in a red fabric.

A further shallow scoop [1008] was located north-east of [1053] though in this case it was separate from the conjoined cluster (Fig. 4.2). Again this was only partially exposed within the trench as it disappeared into the northern baulk. It lay c. 0.2m north-east of [1053] and was of irregular shape, measuring, as exposed, 0.7m by 0.5m and cut to a depth of 0.1m. Its fill (1005), was a mottled dark brown silt, 10YR 3/2 with black soot-like flecks and orange and yellow flecks of burnt clay, similar to flecking in the fill of flue [1028] nearby. This deposit produced only one small fragment of animal bone.

Discussion

Interpretation of these features is hindered by the fact that they were shallow fairly, amorphous and contained few finds and they may be of contrasting dates (later Roman and Saxon). The narrow confines of the trench mean the wider context is not available. Overall there is limited information.

Only part of feature [1006] was exposed and its function is not certain. The cut was descending at the point where the feature entered the southern baulk and it is possible this was the terminal of a shallow gully. The sooty lens in (1002) (Fig. 4.3 no. 6), may have derived from activities associated with the flues to the south-west of this feature, perhaps indicating some contemporaneity, or perhaps if [1006] was a later feature, erosion and re-deposition of debris from the flues. Just possibly [1006] was a stoking-pit for a flue, a possibility supported by the presence of the soot lens and its generally dark fill.

The fact that cuts [1006] and [1021] were contiguous and in an approximate alignment could be taken to indicate they are elements of one larger unit. It is unlikely this was an irregular gully; more probably there were three or four scoop cuts through the chalk and stone surface (1060)/(1078) with the areas around the cuts then being eroded once the surface had been broken, leading to these features having shallow surrounding shelves and resulting in their 'joining-up'. Puddling above the exposed clay and footfall wear may have been significant parts of this process. The wholly shallow feature [1008] may simply represent wear or dislodgement of the surface (1060) etc. though its fill seems to reflect the presence of burning activities nearby, potentially the flues [1012] to the south-west (as seen with [1006]). The scoops may be the base of small post-holes for the insertion of a light fence or screen between the area with the corn-dryers and

activity of a different kind to the north-east. The presence of some early medieval pottery suggests one or two of these features were of this date or open or disturbed at that time.

Phase 4

Medieval Rigg and Furrow features

Furrow [1070]

Two furrows were exposed within Trench A, both aligned south-east to north-west and at separate ends of the trench (Fig. 4.2 and 4.3 nos. 2–4). This alignment was consistent with the present field boundaries which were determined by the roads to the north and east of Corner Field (indicating the very considerable age of these routes) and accords with the scheme in this western half of Corner Field as suggested by the geophysical survey. [1070] lay at the north-east end of the trench. Only 0.96m of its width lay within the trench but near the north-east baulk the cut had flattened out to an evident base c. 0.16m below the base of the modern ploughsoil, suggesting the feature (as it survived) was not especially broad (Fig. 4.3 no. 2). The fill (1069) was a greyish brown silt (7.5YR 4/2, with a greenish tinge) largely free of coarse inclusions and similar to the fills of the other furrows encountered in Trenches A and C. There were no finds from this fill.

Furrow [1076]

Furrow [1076] lay at the south-west end of the trench (Fig. 4.2). It measured approximately 1.7m in width and survived to a depth of c. 0.08–0.10m (Fig. 4.3 nos. 3–4). It had cut the laid chalk surface layer represented by (1039) and (1065) as well as the tops of several features: these being, west to east [1034], [1057], [1012] and [1038]. Its fill (1003)/(1013) was generally a qualitatively similar silt to (1069) approximately greyish brown 7.5YR 4/2, with a greenish tinge. The tilling process will have incorporated material immediately disturbed by the plough and so the areas above the flues [1012] and [1057] included darker silt with a substantial number of bone and pottery fragments (1007). In this case there were more inclusions of rounded and sub-rounded chalk, presumably in part derived from the chalk surfacing layer. A small number of finds from (1003)/(1013) included eight sherds, including a sherd from the flagon mainly represented in the adjacent surface layer (1039), and nine items of animal bone; four fragments of fired clay were also recovered, probably deriving from the fill of the flues [1012] and [1057] which this furrow cut.

4.3 Trench B

Introduction

Trench B was located on the north side of the field along the uncultivated hedgerow margin. Running westward from a point towards the former chalk quarry (c. 15m to the east from the eastern terminus of the trench), it followed the edge of the field, aligned south-west to north-east. Trench B measured 26m by 1.4m with the more easterly 17m excavated in August 2008 and the remaining 9m excavated in August 2009, the latter linking Trench B with Trench C. In total 36.4 square metres were examined via Trench B. The trench lay just 4.1 m south of the edge of the Hatcliffe road, with the hedge between. The uncultivated hedge-side margin had been broadened by c. 0.8m about two years earlier in line with policy at the time to increase wildlife habitat around fields where feasible. At the time of excavation in 2008/9 this recent policy meant the southern 0.7m of the trench was over softer previously cultivated soils with some prospect of greater truncation of underlying deposits, in contrast to the more northerly 0.7m, where there was a greater headland of topsoil, the northerly most 0.4m of which had not been disturbed for perhaps centuries. This more northerly strip next to the hedge therefore had the potential for better preservation of any archaeological contexts present. The topsoil (2001) was excavated using hand tools during both seasons. The more northerly margin was hard and compact and given this was on both occasions summer months, the soil was very dry with moisture having been extracted by the adjacent hedge. It was also of greater depth, at 0.35m, though not by much, as the more southerly side was 0.3m thick. This topsoil was closely monitored for finds, with metal detecting carried out. No archaeological contexts were present below the topsoil through the most easterly 11m of the trench (examined in 2008), with cleaning revealing a blanket of glacial yellowish brown till over chalk through this area. This till carpet had been incised by modern plough cuts. One of these was only 0.4m from the northern baulk indicating that ploughing had once (in comparatively recent times at least) been right to the absolute possible margin of the field. Notable finds from this topsoil horizon included two complete hobnails, iron nails, a late fourth century Roman coin (see below) and nearly three hundred sherds of pottery. No trace of rigg and furrow cultivation was observed within Trench B and this is explained by the fact that as the geophysical survey shows the

orientation of that cultivation was, in this part of the field, parallel with the current northern edge of the field/the road to Hatcliffe and so even if this cultivation scheme extended as far to the north as the approximate area of Trench B then the width of the trench was not intruded upon by any furrows.

With the exception of one ditch, the features recorded via Trench B were comparatively shallow and the impression gained was that this area had been subject to truncation, with no perceptible improvement in survival adjacent to the hedge, countering the speculation of better survival away from modern ploughing. The presence of so many pottery sherds in the ploughsoil is consistent with such truncation. Several linear and point features were identified following cleaning after the topsoil had been removed. Three significant cut relationships were observed between linear features enabling phasing. Other features are attributed to the three phases by alignment and finds and in their case ascription is only suggestive.

Phase 1

Linear Feature [2039]

Part of a feature of unknown overall dimensions, cut into the natural till, was exposed by the northern baulk, west of the major ditch [2006] which cut it (Fig. 4.4). This feature was aligned south-west to north-east and was traceable for a maximum of 2.5m between a possible rounded terminal at its western end and its intersection with [2006]; it was not traced to the east of [2006]. A width of 0.3m (maximum) was exposed within Trench B with the side of the feature sloping sharply downwards towards the northern limit of excavation, and was still descending at the limit of excavation. As exposed it was deepest at its eastern end where it was 0.19m in depth, below the present top of the natural till. There was a single fill, (2038), a dark greyish brown silt 10YR 4/3; chalk fragments and flecks were present, mainly of moderate size up to c. 40mm. It yielded six sherds of Roman pottery (including a colour coated sherd of Nene Valley type), 57 small fragments of animal bone, fired clay and an iron object, probably a knife blade RF 2114.

Gully [2030]

A shallow straight gully (or base of ditch) [2030] lay at the western end of Trench B, to the south-west of [2039] (Fig. 4.4). The western butt-end terminal of [2030] extended the feature a short distance into Trench C (Fig. 4.7). It lay below the

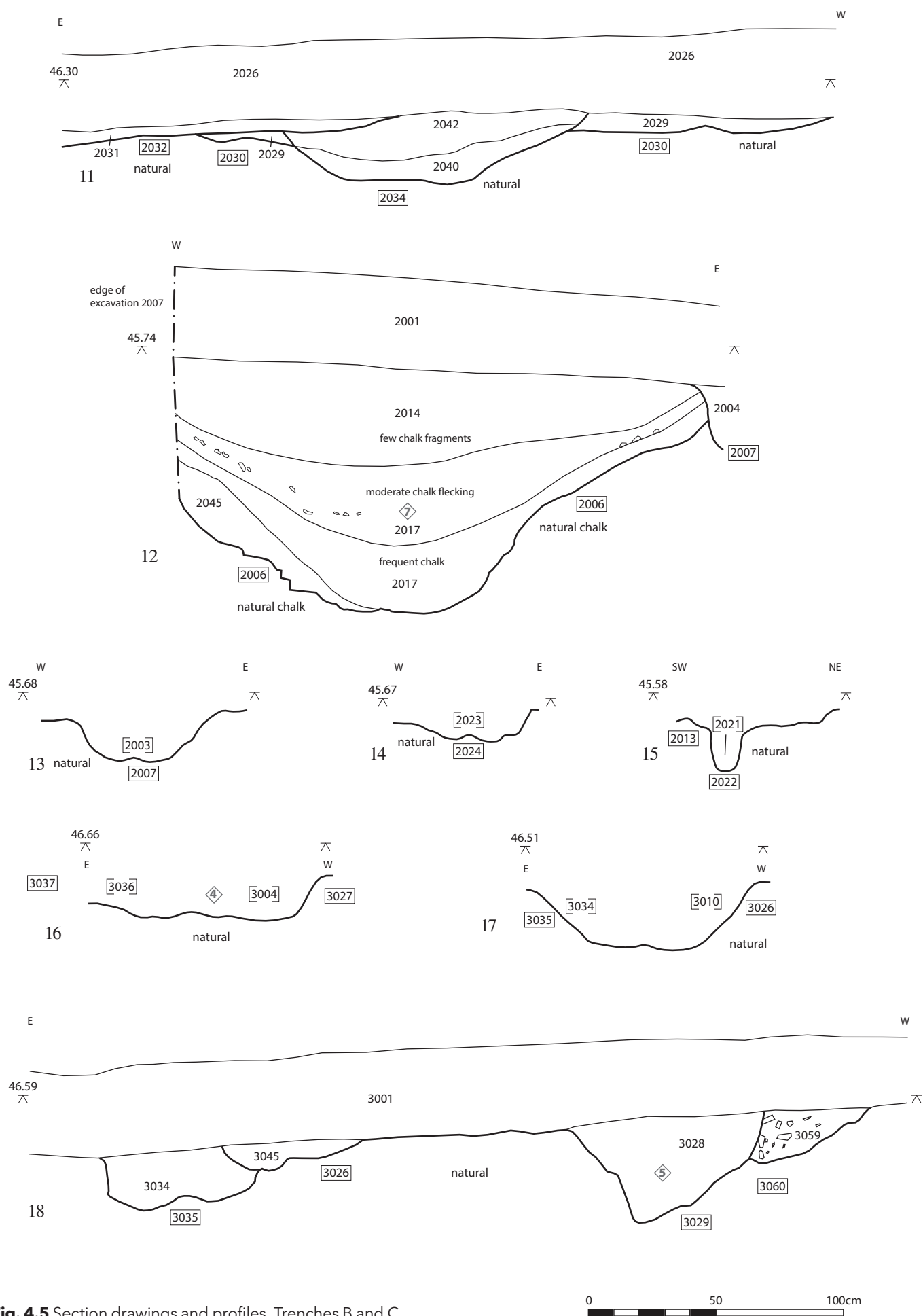


Fig. 4.5 Section drawings and profiles, Trenches B and C.

topsoil, was cut into natural, and near to its eastern end within Trench B was cut by Ditch [2034]. It extended for 6.8m before disappearing beyond the southern baulk of Trench B just east of [2034]. It was of regular form with a u-shaped profile. It measured c. 0.58-0.7m in width and survived to a depth of around 0.16m below the present top of the natural sub-soil (Fig. 4.3 nos. 7–9). Its fill (2029) was a dark greyish brown silt with loam and clay 10YR 3/3 with comparatively few chalk inclusions; angular fragments of shattered tabular flint were though a characteristic, if sparse, element. A coin of Constantine I dated c. AD 307-310 was recovered from (2029). The pottery from this feature amounted to 21 fragments, generally small with an average sherd weight of 5.8g but included rims from two Roman ‘dog dish’ type vessels and a probable Swanpool beaker. Twenty-four items of animal bone were recovered from this fill, notably teeth and jaw fragments. A bulk soil sample for environmental analysis was collected from (2029).

Discussion

The most likely interpretation of feature [2039] is that it was a short gully. Possibly this originally drained into [2006] but if so it filled up in the exposed area at least before [2006] was filled, as (2014), the upper fill of [2006], overlay its fill. More probably [2006] was a later feature.

It is possible that [2030] is contemporary with [2039]. These features, whilst not exactly on the same alignment share a similar general orientation (Fig. 4.4). Both features are cut by Late Roman ditches that, themselves, share an alignment. The character and condition of the finds from features [2030] and [2039] is similar: typically small pottery sherds and animal bone which is fragmented and displays a distinctive presence of caprine, cattle and pig teeth and jaw, together with foot bones. Since neither feature was fully exposed within the trench it is possible both linear features turn away from the area of Trench B and demarcate enclosures with the gap between them within Trench B being an access way. The base of [2030] falls around 150mm from south-west to north-east which may be a function of the general topography but could suggest its purpose was for drainage. Finds from these features date to the fourth century with an early fourth century date for this phase entirely possible.

Table 4.2 The Sequence at Trench B with approximate dates

Phase	Context/Feature/ Feature Group	Approximate Date
Phase 1	Linear features [2030] & [2039]	Early fourth century
Phase 2	Ditches [2034] & [2006]	Mid- to late fourth century
Phase 3	Ditch [2007]	Late fourth century
Phase 3	[2009], [2011], [2013], [2015], [2019], [2022], [2024]	Late fourth century or Saxon
Unphased	[2044] and [2037]	Uncertain, possibly Roman

Phase 2

Ditch [2034]

Ditch [2034], which cut [2030], was a deeper feature with a fairly regular u-shaped profile aligned south-east to north-west (Fig. 4.4). It was cut into natural deposits, reaching chalk below the till layer; its upper edges where it cut this clay were slightly irregular in plan perhaps due to differential erosion of this soft material; lower down, where it cut the chalk, the feature was much more regular. It measured c. 1.1m in width and was approximately 0.29m deep with a flat base (Figs 4.3 no. 10 and 4.5 no. 11). It had a lower fill of clay with silt (2040) 10YR 4/6, presumably representing erosion and wash from the sides etc. The upper fill was a dark grey silty loam, 10YR 4/1-4/3 (2042) with frequent fragments of chalk. (On the southern side of this feature these fills were excavated as one unit (2033)). Thirteen pottery sherds came from (2040) and seven from (2042) with 17 from (2033); there are several conjoining sherds within and between these contexts suggesting this material is less residual than that within adjacent contexts (though see 6.2). Animal bone from these fills amounted to 29 items.

Ditch [2006]

Some 15m west from the eastern terminus of Trench B was a substantive ditch, cut [2006] (Fig. 4.4). The ditch was aligned south-east to north-west and so bisected the trench at a right angle. It had regular sides and base, cut into jointed chalk bedrock (Fig. 4.6). Overall it had a u-shaped profile with a steep edge on its western side; on the eastern side it had a 50° slope on the lower section opening to 30° in the upper profile (Fig. 4.5 no. 12). It measured 2.3m in extant width, though it was truncated on its eastern side by



Fig. 4.6 Ditch [2006] in 2008.

the shallow ditch [2007]. Ditch [2006] was 1.3m in depth measured from the top of the present topsoil, and 0.95m deep below the present top of the natural. Three fills were present. The lowest fill (2045), on the western side, was a brown silt with chalk fragments, 10YR 4/3-5/3, with more clay than (2017) the main fill through the lower 0.55m of the ditch. (2017) was a fairly homogenous brown silt (10YR 4/2 to 4/3) with chalk fragments (up to 65mm in longest dimension) and flecking moderately present throughout, somewhat more frequent in the lower third, together with occasional charcoal flecks. The upper fill (2014) was 0.4m in maximum depth and was a dark greyish brown silt with loam and with far less chalk (10YR 3/2). The number (2025) was allocated to a temporary baulk on the lip of the feature, being part of the (2014) unit.

There were no finds from (2045). A range of finds were forthcoming from (2017). These included pottery, bone, fragments from two igneous quernstones (Querns B1 and B2), two hobnails, four iron nails (three with large sub-square or round heads, Table 7.2), an iron ring RF 2004, a part of an iron dagger chape RF 2005, a strip of iron RF 2006, a small iron bar or ingot RF 2007, a copper alloy item possibly from a brooch RF 2068, cinder slag and a fragment from the shell of a garden snail. Approximately 70 sherds of Roman pottery were recovered from (2017); these were generally small

fragments, the average sherd weight being 9g, and had the appearance of residual material; three samian sherds and a colour coated fine ware were amongst this group. A Swanpool mortarium rim and other finds place the filling in the later Roman period. Context (2014) contained pottery, bone and coal, and (2025) pottery, bone and slag. The pottery from (2014)/(2025) was in a similar condition to that from (2017), comprising collectively 16 sherds with a closely corresponding average weight of 8.9g; a colander was represented. Animal bone from (2017) amounted to 196 bones and fragments including caprine, lamb, cattle and horse jaws and/or teeth and many small split fragmentary bones; that from (2014)/(2025) consisted of 59 bones and fragments, largely broken and split small fragments but also cattle and caprine teeth. A bulk soil sample was collected from (2017) for environmental analysis.

Discussion

Both [2006] and [2034] were aligned south-east to north-west and cut features ascribed to Phase 1 and so there is a case for allocating these features to the same phase. Excavation showed that [2006] was a sizable ditch of regular form. It filled in the fourth century, with some residual material, including items of second century date. These finds were probably general detritus from around the feature

that accumulated over time. Its middle fill (2017) included Late Roman pottery, with its main fills showing bone and pottery items to be of a similar character and condition. The range and quantity of material was relatively extensive. The assemblage, as with groups from adjacent features, suggests occupation/concerted activities close by.

The scale of feature [2006] implies it was an important element in the organization of the site. Given it was cut by a shallower linear feature [2007] which followed a similar alignment the latter could be a replacement for [2006]. The geophysical survey suggests that [2006] is part of a longer arterial ditch apparently flanking a trackway/enclosures to the south of Trench B (Fig. 3.12). If it was a track-side ditch then it may not have had a partner or equal partner ditch to the west, as the geophysical survey hints at an absence of a ditch of similar signature opposite this point, to the west. It is conceivable that [2034] is the partner ditch to [2006] albeit of differing scale. The gap between them was c. 2.7m, sufficient for a trackway, though perhaps [2034] was a pair for the [2007] ditch. Alternatively, the size of [2006] might suggest that the feature was a significant boundary, especially given that there are no features necessarily earlier or contemporary in origin with it through the 14.5m of Trench B to its east. It could be contemporary in origin with ditch cuts [5022] and [5003] at Trench E. Overall a mid- to late fourth century date seems probable for its filling.

Phase 3

Features on east side of [2006]

Shallow Ditch [2007]

Shallow ditch [2007] lay on the east side of ditch [2006] which it cut (Fig. 4.4). This ditch was of regular u-shaped profile and well defined except on its north-eastern side by the shallow cut [2009] with which it perhaps merged and which may well have been contemporary (Fig. 4.4). [2007] measured 0.44–0.5m in width and was cut to a depth of 0.25m below the top of the extant natural at the northern baulk, being marginally shallower on the southern side of the trench where there was greater truncation (Fig. 4.5 no. 13). Its fill (2003)/(2004) was a dark greyish brown silt with loam, 10YR 2/3, with some charcoal flecks; it had few coarse inclusions. Pottery and bone were the only finds present. The pottery consisted of 13 fragments with an average weight of 5.8g including Roman Dales ware and Saxon sherds. The bone finds from the fill of this gully consisted of 68 items, 64 being fragments, many small with few identifiable bones excepting teeth and jaw fragments, plus a rib

from a bird. From the topsoil above this gully a coin of Theodosius I c. AD 388–395 was recovered and an association with this feature is possible, though equally it could be from an adjacent deposit or have been disturbed from elsewhere.

Gully [2024]

Approximately 1.3m east from [2007] was a further regular gully [2024] on a similar alignment (Fig. 4.4). The latter was slightly broader than [2007] at c. 0.56m but shallower at c. 0.15m, being of broad u-shape (Fig. 4.5 no. 14). This feature was traceable for c. 0.9m but lost definition in the northern section of the trench with its probable terminal [2016], merging with the [2009]/[2013] complex, which, as with [2007], it may have been contemporary with. [2024] was filled with a brownish grey friable silt (2023) similar to (2003)/(2004); it produced several fragments of bone together with teeth from pig, caprine and cattle but no pottery. The lower fill at the terminal [2016], (2015), was a silt with clay and produced three small Roman sherds and three very small fragments of iron slag.

[2009] and other features

[2009] on the north side of the trench between linears [2007] and [2024] was a broad shallow cut only partly caught within the trench (Fig. 4.4). It was c. 1.45m in length (south-west to north-east) and, as exposed, its 'width' was 0.7m before disappearing into the northern baulk. Its edge dipped to the northern baulk so that at maximum the feature was 0.12m deep within Trench B. As represented it was of fairly regular form. It was again filled with a dark greyish brown silt with loam (2018)/(2019) similar to (2003)/(2004) and (2023); this yielded four sherds of pottery including part of the flange from a Swanpool vessel but also Saxon gritted ware, together with 44 items of animal bone, mainly small fragments but including an astragalus. Two pieces of metalworking slag were also present, including an amorphous bubbly fragment (11g) and a dish shaped item, perhaps the accumulation in a small furnace/oven base, dense and iron rich (110g).

To the north-east side of [2024] was an area of shallow scoops [2011] and [2013], together with one likely post hole [2022]. On their western side these scoops were co-terminus with [2009] and indeed these features may well have been contemporary. [2011]/[2013] extended in an arcing form over a distance of c. 2.2m and was c. 0.8m across and at most around 0.15m deep. This series of shallow scoops with gentle slopes disappeared into the north baulk either side

of a small area of undisturbed natural till (Fig. 4.4). A cylindrical cut on the north-east side [2022] was 0.21m in diameter and 0.25m deep below the present surface of the glacial till (Fig. 4.5 no. 15); this appears to represent a post-hole. Three point-like depressions to the north of this feature, along the edge of [2011]/[2013] may be the bases of other post settings with a further two to the south-west of [2022]. The fill of [2011]/[2013] was characteristically similar to the other fills of this complex of features, being a dark silt with loam (2010)/(2012). Two pottery sherds and fragmentary animal bone were recovered from (2012) and bone from (2010). The bone from these fills amounted to 81 pieces and showed much consistency with the finds from other adjacent contexts as teeth, from pig, caprine and cattle, together with jaw fragments and foot bones, were represented.

Discussion

The sequence of this complex of shallow cuts and what is represented is not completely clear; for instance [2009] may be part of a broad short gully or a scoop/depression beyond the limit of excavation. It seems likely that the two linears [2007] and [2024] could be contemporary, yet equally there was no apparent cut relationship with the scoops/depressions to their north. All of these shallow features had qualitatively similar fills (the same fill?) and the nature of the finds they contained was likewise similar, hence whilst potentially they were opened at different times, their fills evidently reflect the same basic soil source and find materials, so their filling may well represent one phase and been broadly contemporary if not synchronic. This soil was comparatively dark suggestive of a composition potentially including organic debris, soot, occupation/activity (and not dissimilar therefore with the fill of Ditch [2006]). There is a distinctiveness to the finds groups recovered from these contexts: small sherds of pottery, likely to represent trampled/residual items, and broken animal bone with a comparatively high proportion of teeth and jaws, as well as some foot bones. Whilst overall numbers are small this may indicate discard nearby, following carcass processing, of less useful animal body parts.

Cut [2009] was not a continuation of feature [2039], on the opposite side of Ditch [2006], both of which were earlier than [2007], indicating that the latter must have been instituted quite late in the fourth century, or was post-Roman but with residual Roman finds. Ditch [2007] and [2024] are unlikely to be structural slots for although they are regular cuts they are close together and there is an absence

of features they could relate to. These two gullies might be thought to define a walkway but then there is the dip with feature [2009]. The post hole/s on the east side of [2013] add to the picture of uncertain function. Whilst too small an area was exposed to be able to draw any firm conclusions it appears that the gullies and scoops are tied to the co-axial principles that dominate the morphology of this Roman site through most of its life, and they may relate to features exposed at the eastern end of Trench C. As perhaps with [2007] they were opened in late fourth century, and were still accumulating fills into the early medieval period. It may be more than coincidence that both sets of the shallow features at the end of the Roman sequence at A and B have Saxon material culture present.

Unphased Features Square Cut [2044]

Feature [2044], approximately square in plan, was encountered following the removal of topsoil in 2009 south of [2039] and west of Ditch [2006] (Fig. 4.4). This shallow feature measured 0.4m by 0.4m and was c. 55mm deep with a flat base below more or less vertical sides. Its fill (2043) was similar to the topsoil (though discernment was complicated as conditions were very dry) and from it was recovered a prong-like iron object, potentially Roman, RF 2200, possibly a stylus or wool comb tooth. No other feature like [2044] was encountered during the excavations and, given its location by the edge of the field and that it was 'square' with the adjacent hedge, one possibility is that it was the base of an informal spade-cut test hole opened in modern times in order to establish the depth of the topsoil and the nature of the sub-surface below; this would explain the topsoil-like fill. No such action could, however, be recalled by the present excavation team. Three fragments of animal bone were also present in the fill so perhaps this was an ancient feature. [2044] lay near to the edge of the Ditch [2006] and it is possible that it represents the base of a post setting, or less likely a hedge planting, to screen this deep ditch.

Small Scoop [2037]

At the western end of Trench B by the northern baulk a small scoop feature [2037] was encountered (Fig. 4.4). It was 0.34m by 0.24m but extended beyond the northern limit of excavation. It was 50mm deep, with its dark yellowish brown silty loam fill (2036) yielding a single tooth. This may have been the base of a post setting.

4.4 Trench C

Introduction

Trench C was located on the north side of the field along the uncultivated hedgerow margin, running westward contiguous with and on the alignment of Trench B. Through its eastern and mid-part it measured c. 18m by 1.2m (with several wider points over short distances up to 2.25 in width to further explore archaeological features). The more easterly 21m were excavated in August 2008 and the western area c. 9.2m by 5.2m was excavated in August-September 2010, September 2014 and October 2015. In total c. 76m² were examined via Trench C. As with B the trench lay just c. 4m south of the edge of the Hatcliffe road (see above under Trench B Introduction). The trench was entirely hand dug with topsoil closely monitored for finds by eye and metal detector. Finds from this topsoil/ploughsoil horizon included five hundred and twenty sherds of pottery, predominantly Roman with some Saxon and Medieval material. A penannular brooch RF 3504 also came from the ploughsoil within C as did two likely copper alloy finger rings, RF 3512 and RF 3513, plus an iron knife blade with tang RF 3511 and several iron nails likely to be Roman. Cleaning again revealed a blanket of glacial yellowish brown till over chalk to underlie the ploughsoil, into which had been cut some 45 features. Rigg and furrow cultivation was observed within Trench C through a sequence of furrows approximately perpendicular to the trench axis.

The main features in the eastern area of the trench were a series of linear cuts perpendicular to the alignment of the trench which appear to represent three cuts dating to the Roman period which are restated later in the Roman period. These features are reported first before the sequence in the middle and western area of the trench is described. The latter comprises four Roman phases and it is assumed that the linear features at the eastern end of the trench relate to this sequence but since only a two-phase sequence is represented it is taken as a working assumption that this sequence equates, in terms of the trench overall, to Phases 1-2 and then Phases 3-4. The linears are described from west to east starting with the earlier series of cuts, features [3037], [3060] and [3035].

The eastern side of Trench C: Phases 1-2

Ditch [3037]

Ditch base (or gully) [3037] was located between feature [3050] (the Phase 1 flue) to its south-west and Ditch [3060] to its north-east (Fig. 4.7). It had been

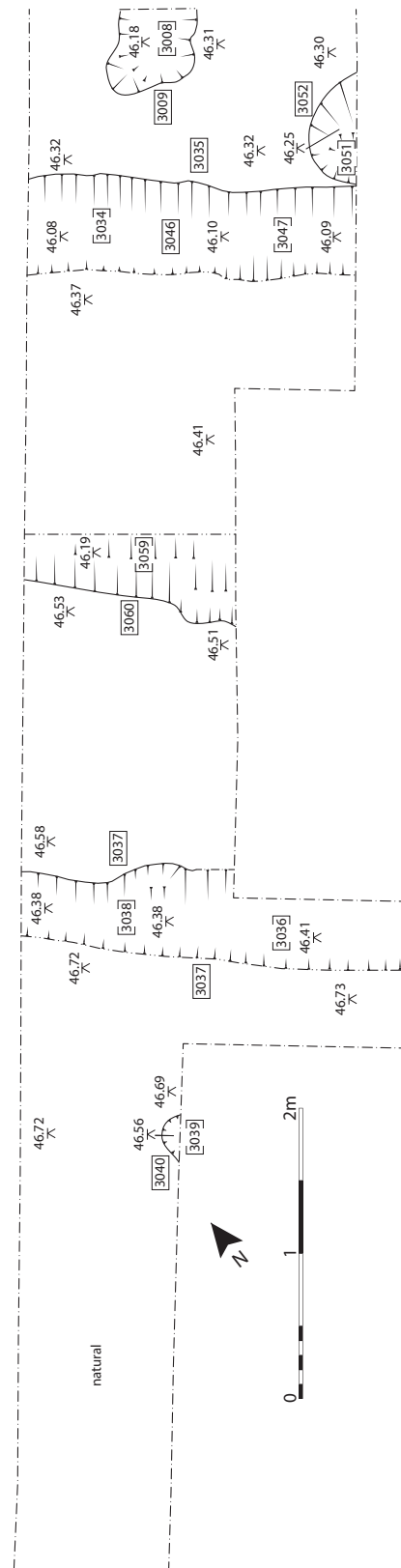


Fig. 4.7 Trench C Eastern end, earlier features, Phases 1-2.

cut by Ditch [3027] which was a feature of similar proportions which had removed its upper element along its south-west edge. Some 2.65m of the feature was exposed as it crossed the width of the trench at a right angle on a straight alignment. Its surviving width varied, but as it survived was a minimum of c. 0.45m, being broader at the top of the extant cut towards the southern baulk, which was probably the original cut rather than erosion of the side. The profile was u-shaped (Fig. 4.5 no. 16). There was a single fill (3036)/(3038), largely silt mixed with pockets of clay and containing frequent chalk fragments of modest size (60mm in longest dimension). This fill produced 14 Roman pottery sherds, a mandible of a cow plus some other animal bone items and coal. Collectively the 14 pottery items from this feature were a mixed group of small sherds, and probably residual.

Ditch [3060]

Ditch [3060] survived as a vestigial linear cut lying towards the north-eastern end of Trench C (Fig. 4.7). It crossed the width of the trench at a perpendicular angle. It had been truncated and fully removed along its north-eastern side by the recut [3029] which was on a similar alignment (Fig. 4.8). [3060] survived to a maximum width of c. 0.4m at the southern baulk of the trench and was extant to a depth of 0.2m with an evident u-shaped profile (Fig. 4.5 no. 18). The fill of [3060] was a dark friable silt (3059) with a high frequency of angular chalk fragments of various sizes on its north-east side. The latter are likely to be a function of erosion on this side of the feature when it was open. There were no finds from this fill.

Ditch [3035]

This straight ditch lay to the north-east of [3060] near to the junction of Trench C and B (Fig. 4.7). A length of 2.25m was exposed as this feature traversed the width of Trench C at this point at a right angle. It was c. 0.75m in width and extant to a maximum depth of c. 0.27m as it survived below the ploughsoil zone. The feature was u-shaped in profile and of regular form (Figs. 4.5 nos. 17–18 and 4.9 no. 19). It was cut on its western side by the linear [3026]. Its main fill was a dark greyish brown silt with loam (3034)/(3047) 10YR 3/2–3/4 with occasional angular chalk fragments and charcoal flecks. This main fill contained 21 sherds of Roman pottery including Dales ware and a small quantity of animal bone. A thin lower fill was present being a greyish brown silt with clay (3046) 10YR 4/4, presumably an early silting. This yielded a single sherd in calcite-gritted ware. Overall the pottery from

this feature comprised a mixed group of small sherds suggesting secondary/residual accumulation.

Discussion

The three linear cuts [3037], [3060] and [3035] lay in close proximity, were of similar morphology and alignment and all cut natural deposits and no earlier deposits; indeed, there were no earlier features in this zone of the site. They represent either large gullies or the bottoms of truncated ditches at a location where intense medieval and subsequent ploughing had occurred, denuding the ancient features; hence considerable vertical erosion is likely, as the heavy count of sherds on the modern topsoil/ploughsoil presumably verifies. There proved to be no better preservation of these features near to the hedge (as had been hoped for when opening this trench) as modern ploughing had, until recently, evidently been undertaken up to the absolute margin of the field, as currently with Stable Field in its equivalent northern side. These three features may well be contemporary and it seems feasible that they relate to the original laying out of the Late Roman site. [3037] and [3035] had similar finds groups but the associated finds do not permit precision in dating; that said, taken together with the evidence from their recuts, a Late Roman date of their filling is apparent. They were spaced c. 1.75m apart (measured from edge to edge) and so may be ditches flanking a track/access way, or two may be, with the other an enclosure/compound ditch. Apart from the small cut [3040] by the southern baulk there were no features to the south-west of the first linear [3037] for 6m suggesting a compound at this point. The gully [2030] to the north-east (filling in the fourth century) could be contemporary with these three features; it was aligned a little off 90° to the course of the three features but came physically close to them (terminating in a butt end less than 0.6m from the edge of [3035] so they may be part of the same organizational system. Two of the three features at least were seemingly open for some time as the pottery and animal bone from [3037] and [3035] has a residual/secondary character; [3060] may likewise have been open for a period of time but that is uncertain as there were no finds from its fill that might indicate this was so.

The eastern side of Trench C: Phases 3–4

The three linear features crossing the width of the trench towards its north-eastern end, features [3037], [3060] and [3035] (above), were all recut. The recuts are respectively [3027], [3029] and [3026]/[3054] and are reported here.

Roman pottery and animal bone including a caprine mandible was present in this context; the twelve sherds of Roman pottery were a mixed group of small sized fragments. A bulk soil sample was collected for environmental analysis.

Linear Feature [3026]/[3054], plus Post Hole [3044] and Scoop [3052]

To the north-east of [3029] was a further linear cut (or gully) that likewise had been imposed over an earlier ditch, in this case [3035] (Fig. 4.8). The 'dog-leg' form of this feature was morphologically somewhat different from the two (presumed) contemporary linear cuts to the south-west and indeed the proceeding feature at this point [3035] which was straight and highly regular. By the southern baulk [3054] was 0.6m in length (disappearing into the southern baulk), and c. 0.55m in width. It was a broad u-shaped form only 0.11m deep. To the north it continued as a deeper cut [3026] c. 0.26m as extant (Figs. 4.5 no. 18 and 4.9 nos. 19 and 20) which ran more north-south for 1.2m before turning to a north-westerly alignment for the remaining exposed 0.8m. Again the profile was u-shaped; the width was a consistent 0.45m. The fill of the section designated [3054] was a dark brown silt (3053) 10YR 4/3 with some chalk fragments, while the fill of [3026], (3010), was a characteristically identical deposit. (3010) contained 31 sherds of Roman pottery including Dales ware, a rim sherd from a very small colour coated ware of Nene Valley beaker type and a sherd of Parisian ware type, a small amount of animal bone and oyster valves.

Likely to be contemporary with this linear feature is the post/stake hole [3044] which was located immediately adjacent on its east side (Figs. 4.8 and 4.9 no. 21). It had cut the fills of the earlier ditch [3035]. Sub-circular in plan it measured c. 0.28m in diameter and was 0.24m deep (having doubtless been truncated). Its tapering base cut the natural chalk. Its fill was a silt with clay 10YR 4/3-4/4. A single sherd of Roman pottery was present in this fill.

A shallow scoop or small pit occurred by the southern baulk c. 0.6m north-east of [3054], being [3052]. Within the trench this feature was semi-circular measuring 0.76m by 0.32m with gently sloping sides, for this feature was just 0.09m deep at maximum (Figs. 4.8 and 4.9 no. 19). Its silt fill (3051) was dark brown 10YR 3/3 with fine inclusions of flint and chalk. Finds from (3051) included a single sherd of Roman pottery from a colour coated beaker, animal bone, coal and oyster shell.

Post Hole [3040]

A small discrete cut [3040] by the southern baulk c. 0.7m south-west of [3027] possibly represents a post hole. Only perhaps half of this feature was caught within Trench C as it continued beyond the baulk. It was c. 0.3m in apparent diameter with sheer sides cut to a depth of 0.13m below the base of the current ploughsoil. It was filled with a dark silt 10YR 3/2 (3039) with occasional chalk grit. The only finds from this fill were a small fragment of Roman window glass (see Glass Catalogue, Item G5) and some fired clay.

Discussion

These recut linears were presumably a restatement of the same organizational layout in this part of the site. They are subsequent to the earlier set of features but need not be precisely contemporary with each other. The three earlier cuts had seemingly filled or mostly filled up before the re-cutting, certainly to the level of the archaeological deposits as encountered at the time of excavation in 2008 and so it may be that these alignments were visible via hedging or a fence or bank at the time of the restatement in the Late Roman period. There is no obvious current trace of such fencing or hedging though possibly the likely post holes close by these features were of this purpose. The truncation of older archaeological deposits at this point by medieval and modern cultivation must, though, always be borne in mind: evidence may well have been lost. The possibility that the features were still visible at a higher level now lost through truncation a strong likelihood. The dog-leg arrangement of [3026]/[3054] could indicate a gateway perhaps related to the (now) very shallow cut [3052] to its north-east (though this, seemingly, was not a post-setting). The post/stake hole [3044] to the north-east of [3026] is perhaps related to another gate associated with the terminal of ditch [3009]/[2030] 0.8m to the east, meaning that access to this system of areas defined by these ditches could be managed, perhaps for stock control.

Although features [3027] and [3037] appear to be straight truncated linear ditches (or gullies) the presence of burnt clay fragments, much charcoal and a distinctive dark fill (3004) perhaps raises the possibility these may be corn dryer flues, re-cut in approximately the same location as with [1012] and [1057] in Trench A. On balance this seems unlikely. There was no evidence of scorched bases or feature sides and with 2.65m exposed there was no terminal or stoke-pit exposed (though [3511] at the south-western end of Trench C was of not dissimilar

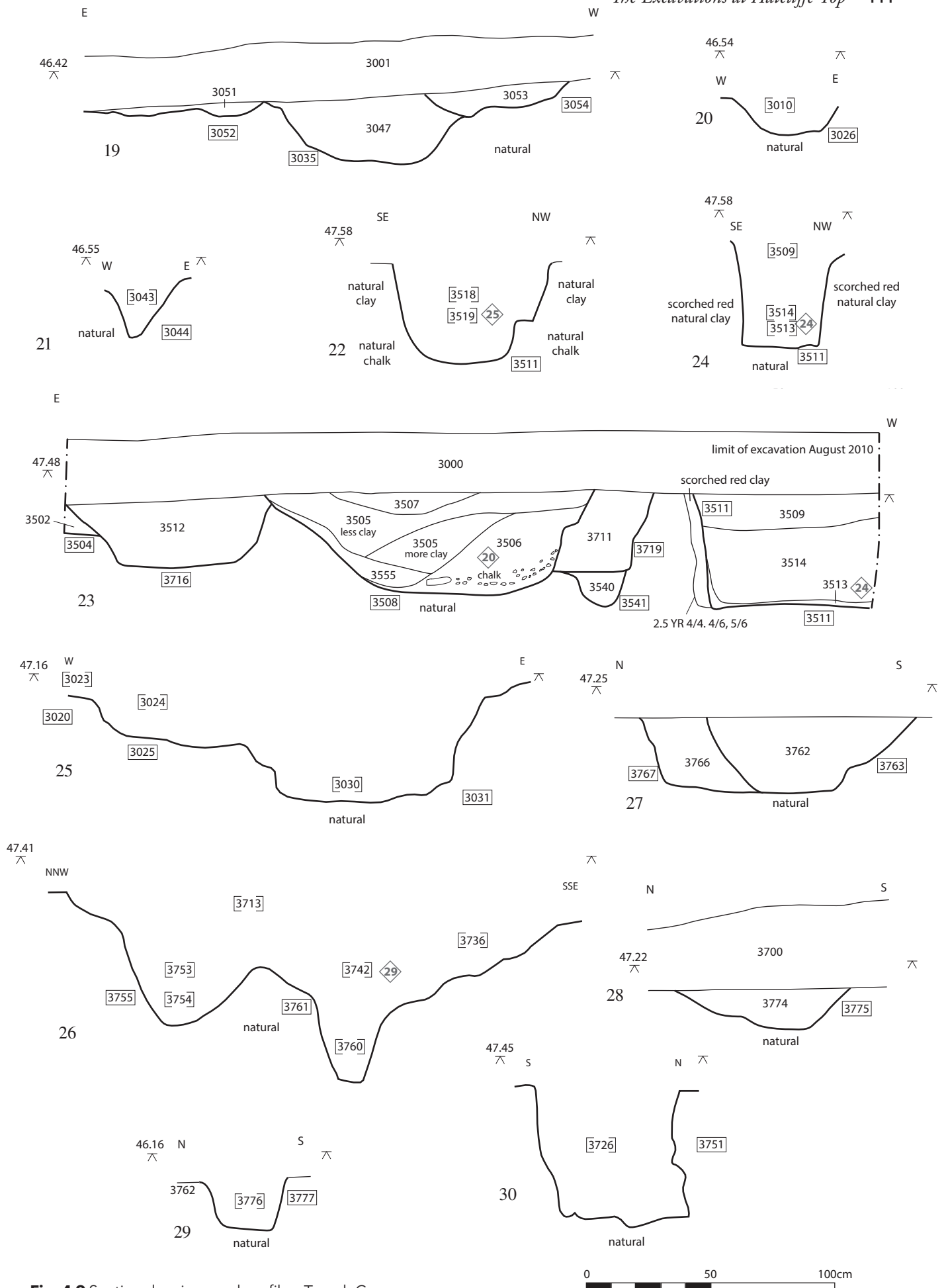


Fig. 4.9 Section drawings and profiles, Trench C.



Fig. 4.10 Excavation in progress in 2008 at the eastern end of Trench C.

length). These two features had a broad u-shaped profile being comparatively shallow and so were not 'channel like' deeper cuts as was [3511] or [3745]. The fills of [3037] produced only one small fragment of burnt clay (22mm in longest dimension), but the fill of the successor feature (3004) yielded burnt clay fragments as noted above. This fired clay, charcoal and likely sooty element within the fills of [3027] seem most likely to represent debris deriving from nearby activities, perhaps related to the Oven/Dryer [3050] to the west, whilst the ditch was open rather than being indicative of this feature being a flue or involved directly in processes involving heat.

All three linear features appear likely to have been open for some time receiving cultural material. The more easterly two features had more evidently residual/secondary material. In contrast fill (3004) in [3027] had a noticeably higher number of finds of a fresher nature, including a large group of oyster valves likely to have been deposited in a single event given their uniformity and clustering, large bone items and a pottery group with comparatively large sherds, with several from a single vessel. The finds from this deposit look to include primary waste from domestic and/or similar activities nearby. On balance it is likely that these recut linear features were recut at the same time, in a re-statement of trackside and enclosure boundaries, though in this later manifestation slightly further apart than with their three predecessors.

Table 4.3 The Sequence at Trench C (main features) with approximate dates

Phase	Context/Feature/ Feature Group	Approximate Date
Phases 1-2	Ditches [3037], [3060] & [3035]	Mid-third to earlier fourth century
Phase 1	Ovens [3050] & [3511]	Late third to early fourth century
Phase 2	Hard surfacing (3500)/(3502)/(3062) & (3061)	Early fourth century
Phase 2	Post Settings [3025], [3031] & [3033]	Early fourth century
Phase 2	Gully [3775]	Fourth century
Phase 2A	Post Pit [3755]	Early fourth century
Phase 2A	Gully [3767]	Early fourth century
Phase 2B	Post Pit [3761]	Early to mid- fourth century
Phase 2B	Ditch [3963]	Early to mid- fourth century
Phase 3	Ovens (3552), [3739], [3745], [3751] & [3759]	Mid- to late fourth century
Phase 3	Gully [3719]	Mid- to late fourth century
Phases 3-4	Ditches [3027], [3029] & [3026]/[3054]	Mid- to late fourth century
Phase 4	Ditches [3718] and [3771]	Late fourth century
Phase 5	Furrows [3022], [3716], [3020] & [3721]	Medieval

The western side of Trench C: Phase 1

During Phase 1 the western area of Trench C was in use for likely crop processing with two oven flues belonging to this Phase.

Oven Flue [3050]

This feature lay to the south-east of Furrow [3021], by which it was cut, and north-east of pit [3031], which, too, was of later date (Phase 2). Aligned essentially east-west this cut measured 3.8m by 1.2m as exposed within the trench; neither end was revealed by the trench. [3050] bowed at its centre point within the trench, possibly to compensate for a sizable fragment of tabular flint protruding amongst the natural clay on the south side (Fig. 4.11). It survived to a depth of c. 0.23m, with broadly regular sides, a flat base and u-shaped profile, steeper on its south side. Much of the natural clay into which this feature was cut was, at the edge of the feature, a distinctive dark chestnut indicating exposure to heat; some areas were hardened, evidently by this process. On the south-east side, by the baulk, it was shallower and appeared to taper, suggesting the possibility this was not far from a terminal point. Over the top filling of [3050] at its western end a number of laid chalk blocks (3061) (Fig. 4.12) seemingly represented ground consolidation ('metalling') and appear likely to be contemporary with the similar coarse material representing hard surfacing to the south-west (3500)/(3502)/(3062) of Phase 2; these surfaces occur at the same point in the sequence and at the same physical level.

The fill of [3050] consisted of a loamy silt 10YR 3/2-3/4 (3018)/(3041)/(3049)/(3055). Finds from the fill of [3050] included 179 items of animal bone including separate teeth, 59 sherds of Roman pottery, three iron nails and fragments of coal. The animal bone included cattle vertebrae and long bones, teeth from sheep (or goat), pig jaws and a tusk, horse hoofs and bird bones. The pottery consisted of a mixed group but of Late Roman date, including Dales ware forms, colour coated beaker sherds of Nene Valley type, sherds from the rim of a small jar, a Swanpool oxidized flanged bowl and a fine oxidized beaker rim probably a Swanpool product. A sample for environmental examination was taken and proved to contain only a moderate frequency of cereal grains, both of wheat and barley.

Oven Flue [3511]

This oven/dryer lay towards the north-west corner of Trench C, south of Oven [3050]. It was aligned

south-west to north-east (Fig. 4.11). Its presumed stoking-pit will have been at the north-east end although this had not survived as the area where it had probably been had been cut through by the laying of the hard surface (3500)/(3502) and in turn by Gully [3719] and Ditch [3718]. This oven had a comparatively long flue and was exposed following the removal of the modern ploughsoil and the excavation of the cobbled surface (3500)/(3502). The flue [3511] was quite regular in form, comparatively deep and had a rounded distal terminal (Fig. 4.11). It measured c. 2.4m by 0.44m widening towards its south-western end to 0.7m. It was c. 0.44m deep, having been cut through the natural clay to chalk. It had steep near vertical sides and its base was flat (Fig. 4.9 nos. 22–24). The sides of the feature showed a strong degree of scorching at their north-eastern end. At the base and sides of the cut four features were revealed being the natural pipe-like cuts [3526], [3532], [3541] and [3543] (see below). The base of the oven contained a thin layer of ash and burnt/carbonized debris (3513) c. 20–25mm. Above this was a thick layer (c. 0.27m) of mainly clay 10YR 5/8, with silt (3514)/(3518), potentially collapsed oven superstructure, but if so not including much burnt debris. The upper fill was a dark brown silt (3509) with rare charcoal flecks which produced animal bone and an iron nail. A sample for environmental analysis was collected from context (3518).

Discussion

The alignments of [3050] and [3511] were not consistent with the cut linear features to the north-east of [3050] through Trench C and Trench B, suggesting they relate to a different organizational layout or were point features where alignment was not necessarily determined by the surrounding site morphology: in fact they were evidently within a compound bounded by the ditch [3037].

The identification of [3511] as an oven/dryer flue seems beyond question considering its character. The whole of this feature was exposed by excavation, bar its stoke-pit which had been lost by the cutting of subsequent features. The identification of [3050] as a flue is slightly less certain but this seems highly probable. Given its form [3050] seems unlikely to have been part of a longer feature. Its atypical alignment, bowed nature, shallower southern end, and the areas of evident exposure to heat, indicate this was the flue of an oven, the most easterly of the group exposed in Trench C. As with the other flues of Trench C [3050] and [3511] had been cut into firm natural clay and were not lined. [3050] was

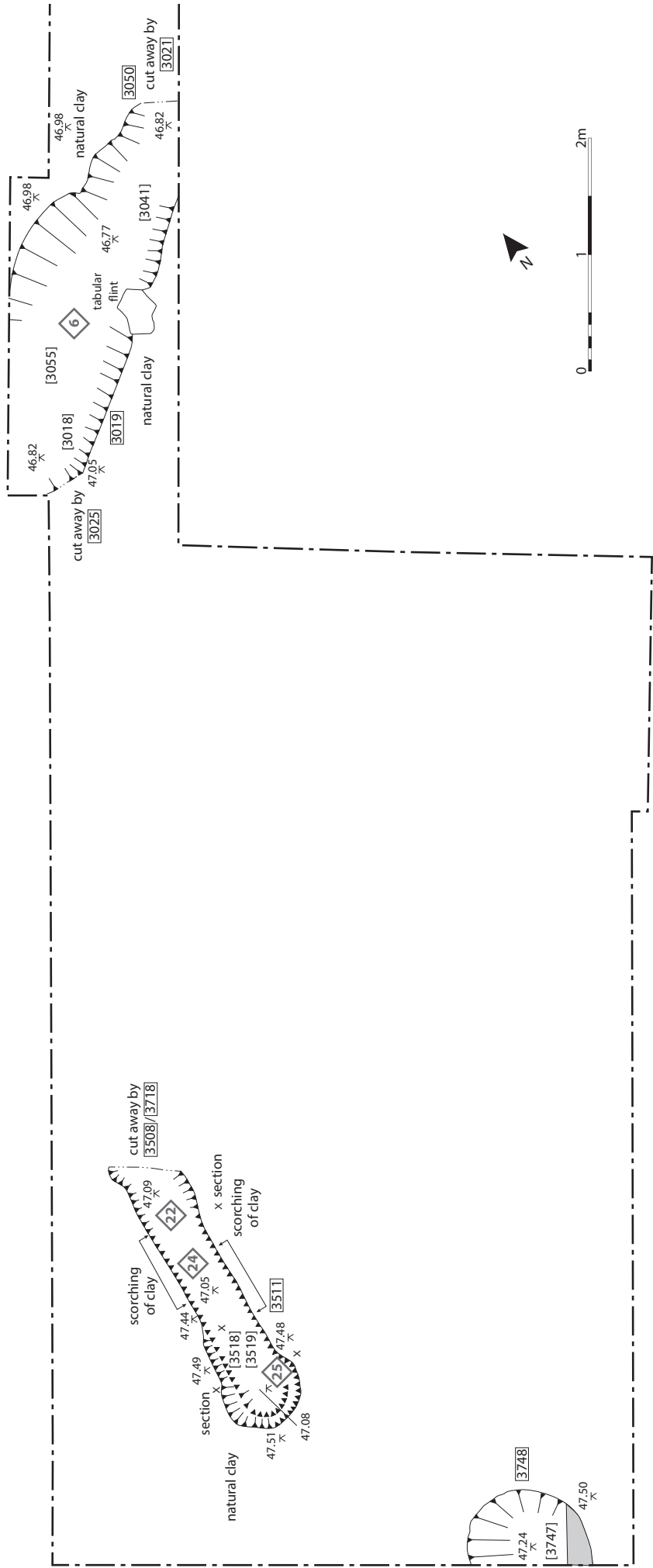


Fig. 4.11 Plan of Trench C, western end, Phase 1.

quite broad but if it ever had been lined, for instance with stone, there was no evidence for such presence or removal. Whilst [3511] had an ashy-soot basal fill, the fill of [3050], whilst dark, lacked much in the way of charcoal and there was no sooty layer at the base of the fill as present with several similar features. Whether its flue was fed from the eastern or western end is not known as neither terminal was exposed. It seems unlikely there was a stoke-pit at its south-eastern end given the tapering nature of the feature at this point, but it may nonetheless have been fed from that end. Unfortunately given the constrictions of the Trench in 2008 no more of the feature could be exposed to the north-west as the trench was already up to the line of the modern hedgerow, while on the south-east side extension would have intruded into the standing cereal crop. The features to the south-west, [3031] and [3033], lay at a right angle to [3050] but are later. The mixed nature of the fill indicates that this was the residue of processing/domestic rubbish. Given the environmental sample yielded only moderate amounts of cereal grain and other cereal remains, perhaps from activities nearby (see Giorgi Section 8.2) it seems this oven had been cleaned out after use or there was simply little associated with its use captured in the sample; it had certainly been fired.

The pottery from [3511] includes types that date from the mid-third to fourth century while the finds from [3050] suggest the feature was filled in the late third or fourth century.

The western side of Trench C: Phase 2

During this Phase a surfaced pathway was laid and a number of post settings, two with associated gullies or slots on a similar alignment to the pathway, can be interpreted as relating to fences and gateways. Overall the features relate to defining space and access.

'Metalled' path: Linear cut [3017]/[3504]/[3553] and Layer (3500)/(3503)/(3510)/(3740)/(3062)

Towards the north-west corner of Trench C, by its northern baulk, a broad shallow linear cut feature [3017]/[3504]/[3553] aligned approximately south-west to north-east had been filled with coarse material (Fig. 4.12). Cut into natural clay, and truncating the northern end of [3511], it was filled and capped with a layer of coarse material (3500)/(3502)/(3503)/(3510)/(3740)/(3062), mainly comprising stone, but including artefacts. Both the

cut and the capping layer had been cut through by the Ovens [3552] and [3516]/[3745] as well as Ditches [3718] and [3719], shallow scoop [3056] and the Furrows [3716] and [3720]. Accordingly only remnants survived, though nonetheless the feature was traceable for 5.8m and where extant was c. 1.2m wide and cut to a depth of c. 0.15m below the base of the present topsoil. The cut had regular sloping sides at c. 45° and a flat base. It survived well in pockets either side of Ditch [3718] where it was allocated the numbers [3504] and [3553] and further east, north of Oven [3745] where it was designated [3017]. Evidently this shallow linear feature had been cut to receive the coarse material. Further to the north-east, as mentioned above, a similar spread overlay the fill of [3050] at its western end near to feature [3031]. Here abraded chalk blocks (3061) ranging from 0.12m up to 0.24m, had been laid horizontally appearing to represent comparable contemporary hard surfacing.

The lower fill of [3553]/[3017] was a thin layer of silt above which was the laid coarse material (Tables 4.4 and 4.5). The fill of [3017] towards its eastern end (3016) was mainly chalk fragments (3062) but with at least one sandstone item (150mm in longest dimension) in a dark silt matrix 10YR 3/4 with some clay; the chalk fragments had been laid contiguously to create a continuous spread. Towards the western side of [3017] this layer included a greater variety of materials and was accordingly distinguished with separate numbers (3502)/(3740). The iron knife RF 3501 came from this context, as did a fragment of whale bone and a fragment of quern fashioned from the Sherwood Sandstone group reused as a sharpening stone (Quern C1). The fill of [3553] was coarser than (3016), being (3500)/(3510), again mainly chalk fragments but including Roman tile fragments, large sherds of pottery, a strip of iron RF 3510, erratics and cobble sized flint in a dark silt matrix 10YR 4/2 with some clay. Again these fragments appeared to have been laid contiguously to create a solid spread. The erratics will be 'field stone' from the Boulder Clay and included sandstones, occasional basalt, some gabbro and other igneous rocks. Tables 4.4 and 4.5 show the composition of the surfacing material from two samples from the excavated sections. These samples confirm the principal component was fragments of chalk bedrock, together with flint (mainly brittle tabular flint) and 'field stone' erratics: all types that will have been readily to hand at the site, with more durable stone essentially outcropping only at the Wolds escarpment some 12km to the west.

Table 4.4 The frequency of rock types and longest dimensions amongst a sample of 85 coarse items from context (3500), part of the hard surface pathway (west of [3718]). The Spilsby Sandstone fragments are likely to come from querns but these pieces were not diagnostic.

Longest Dimension (mm)	Chalk	Flint	Erratic	Spilsby Sandstone	Totals
325-349mm		1			1
300-324	1	1			2
275-299					
250-274			2		2
225-249	1		1		2
200-224		1			1
175-199		1	1		2
150-174	2		2	2	6
125-149	4	4	1		9
100-124	4	3	1		8
75-99	4	3	2		9
50-74	1	1	4		6
Less than 67	35	1	1		37
Totals	52	16	15	2	85
Percentage	61.2	18.8	17.6	2.4	

Table 4.5 The frequency of rock types and longest dimensions amongst a sample of 80 coarse items from context (3502), part of the hard surface pathway (east of [3718])

Longest Dimension (mm)	Chalk	Flint	Erratic	Totals
200-224	1			1
175-199				
150-174	2		1	3
125-149	3	2	1	6
100-124	3	2		5
75-99	7	3		10
50-74	17	2	3	22
Less than 50	29	3	1	33
Totals	62	12	6	80
Percentage	77.5	15	7.5	

Discussion

At Hatcliffe Top this feature was unique as nowhere else was there such a concentration of laid stone and other coarse material. This ground consolidation seems likely to have been a 'metalled'/cobbled path using materials to hand (chalk from the underlying geology, erratics (field stone), robust ceramic fragments, whale bone and quern fragments (Querns C1 and C2) laid and held within a broad shallow slot created for the purpose. Both its western and eastern ends within the trench were truncated by medieval furrows and so it seems likely to have been longer than the 5.8m revealed within Trench C, probably continuing beyond its confines. A decision to create a firm walkway would be entirely sensible given the clay subsoil which is very slippery and hazardous when wet. The alignment of this feature is consistent with the overall co-axial arrangement of the settlement. This hard surface can be associated with four or five post setting and ditches and gullies following a similar orientation in this area of the site (Fig. 4.12).

Pits [3031] and [3033]

Two pits lay to the north-east of the eastern remnant of the hard surface (3052) and south-east of the Flue [3050] sitting in a broader cut [3025] (Fig. 4.12). [3031], [3033] and [3025] lay below the medieval furrow [3020] which had truncated their upper levels. The broad upper cut [3025] was somewhat irregular, measuring c. 1.7-2.4m across, and extending beyond the edge of the excavation to the north-west. It may have been a single initial cut from which the discrete cuts [3031] and [3033] were then instituted, or perhaps it represents the intersection of these two near contemporary pit cuts. To the north [3031] was partly exposed but extended beyond the trench, being sub-square in plan. This feature measured c. 0.9m at the top, having steep sides and a flat base 0.5m across, at a depth of c. 0.57m below the current base of the topsoil (Fig. 4.9 no. 25). To its south-west lay [3033], itself also sitting within [3025]. [3033] was sub-circular in form, broader and shallower than [3031]. It measured c. 1m by 0.82m across but also had a flattish floor at 0.38m below the base of the present topsoil.

The soil fills of the two pits and the upper cut [3025] were characteristically similar and may well have been contemporary. The fill of [3025] was a dark greyish brown silt (3024) 10YR 4/3-4/4. Several fragments of the cranium of a human baby were present in this fill representing secondary deposition. The fill of Pit [3031] was a loamy silt (3030) 10YR 3/4,

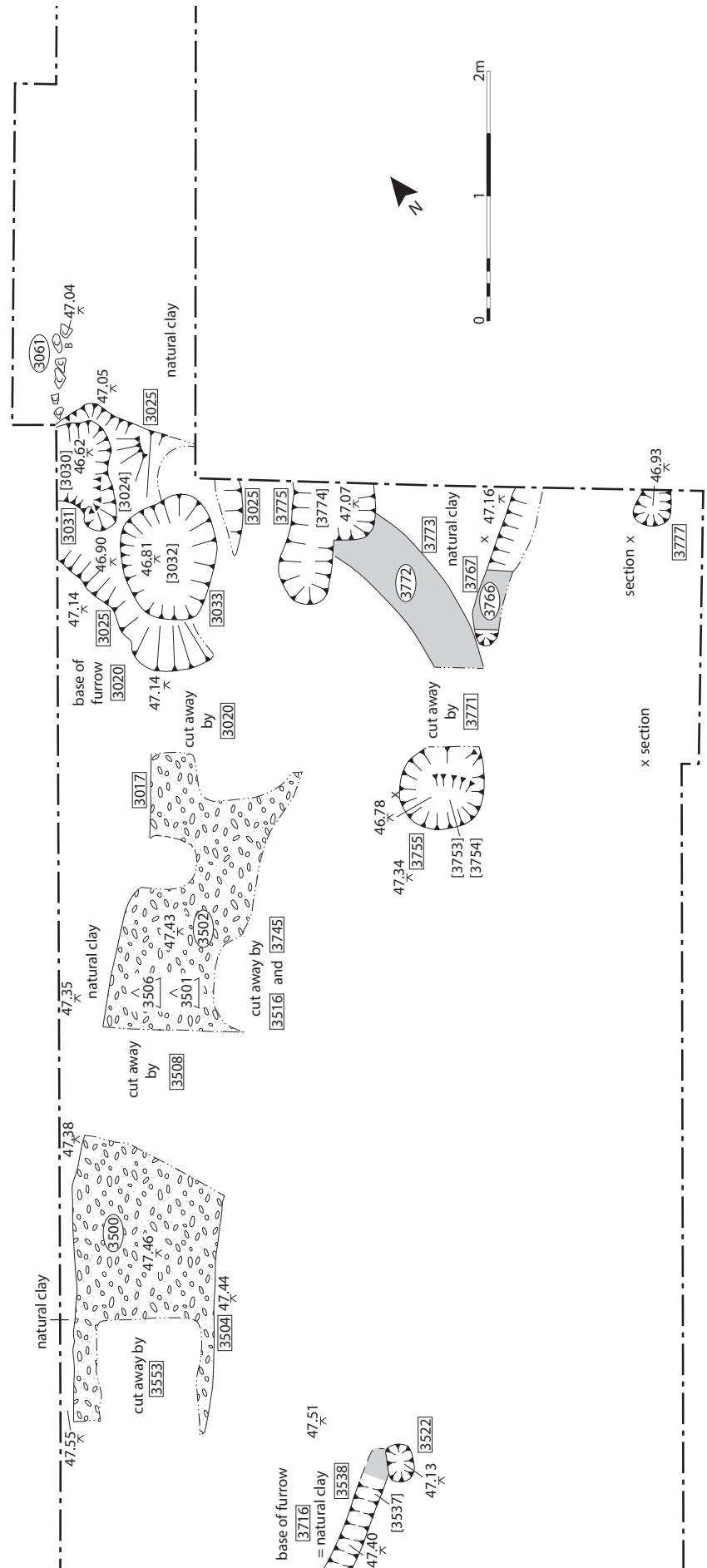


Fig. 4.12 Plan of Trench C, western end, Phase 2a.

similar in colour to (3024) with some charcoal flecks and fragments up to 10mm. Pottery and bone were recovered from this deposit. (3032), the fill of [3033] was again a loamy silty 10YR 3/4. Rare glacial pebbles together with chalk and flint fragments were present in both (3030) and (3032), but not of a scale suitable for post-packing.

Pits [3031] and [3033] seem likely to be post settings, perhaps a contemporary pair or one a replacement of the other. They can be compared with the likewise adjacent post holes [3755] and [3761] also of this phase, though in this case a sequence was discerned ([3761] succeeds [3755]) and although they have similar depths the latter two have narrower/pointed, rather than flat, bases.

Phase 2A

Pit [3755]

Pits [3755] and [3761] lay south of the hard surfacing (3500) etc. and appear to relate to two linear features to their east, [3767] and [3763] (Fig. 4.12). Pit [3755] was the earlier of the two being approximately circular in plan with a diameter of c. 0.7m. It was of regular form with steep sides descending below the clay till cover to a dished base in the natural chalk. It had been truncated above by the medieval Furrow [3720] but survived to a depth of c. 0.45m. It was cut by the pit [3761] on its southern side. This pit had two fills, the upper fill being (3753), the lower (3754). They were similar in comprising a clay, silt and chalk fragment mix, presumably the consequence of backfilling from the up-cast of the original cutting activity. The lower fill had a greater proportion of chalk fragments. The latter yielded one tiny pottery fragment that was undiagnostic. From the upper fill came a sherd of samian, probably from a Drag. 31R dating to the later second century AD but this is likely to be residual.

Phase 2B

Pit [3761]

Pit [3761] lay to the south of [3755]. It was elongated in plan c. 1.10m by 0.8m (Fig. 4.13). It had gently descending upper sides to a central conical area c. 0.3m across which dipped steeply (Fig. 4.9 no. 26). It had also been truncated above by the medieval Furrow [3720] but survived to a depth of c. 0.7m, with the central conical area accounting for half of that depth. It cut the pit [3755] on its northern side. Any direct relationship it may have had with Ditch [3763] is not known as the area between these features was cut by both the Furrow, and in particular by the Phase 4 Ditch [3771]. Pit [3761] had three fills, the upper

fill being a mixed silt and clay with stone fragments (3736), including a flint 250 by 170 by 80mm and an erratic 150mm by 150mm. The main fill was (3742) comprising a mix of silt and clay with some chalk fragments and charcoal flecks; it was mottled medium and light brown 10YR 4/3 and 7.5YR 5/4. The fill of the conical cut (3760) was a tenacious clay with some silt, mid- to dark brown 7.5YR 3/4, and containing angular fragments of chalk in common frequency. Finds included a sherd from a samian dish of Drag. 31 from (3736); this was certainly a different vessel from the samian bowl represented in (3753) from the adjacent pit. Later pottery was also present in the form of a beaded flanged bowl. The fill of the conical cut (3760) yielded no pottery finds. The Crambeck platter rim (Fig. 6.1 no.3) recovered from furrow fill (3713) may have come from this feature as it was found immediately above [3761].

Discussion

Pit [3755] might be thought to predate the majority of the flues in this area (of Phase 3) as its fill contained no burnt clay fragments or exceptional charcoal flecking. Its pit-like form suggests this was a post-setting. Likewise, Pit [3761] might be thought to predate the majority of the flues in this area (cf. Phase 3) for the same reason. The pit-like form of [3755] suggests this feature is a truncated post-setting. The fills of [3761] were similar in comprising a clay, silt and chalk fragment mix, and as with [3755] this was presumably the consequence of swift backfilling using the up-cast from the cutting of the features. Substantial stones in the upper filling of [3761] would be consistent with post-packing while the gentler upper sides of [3761] may have been for ease of access in order to create the lower pipe-cut in the natural chalk, or were created in removing the timber perhaps for re-use.

Phase 2A

Gully [3767]

A gully or slot-like feature [3767] was located towards the south-east corner of the western end of Trench C (Fig. 4.12). Cut into natural clay, it was revealed following the removal of the present ploughsoil. It had been substantially cut away on its southern side by Ditch [3763] of Phase 2B which followed a similar east-west course. As extant it was traceable for 1.25m on its long axis, terminating in a rounded butt-end on its western side. It was at least 0.36m in width and survived to a depth of 0.29m (Fig. 4.9 no. 27). It had steep sides and what survived of the feature suggested a regular u-shaped profile. Its fill was a dark greenish

brown silt (3766) 10YR 3/1-3/2, characteristically similar to several nearby deposits such as (3703), (3772) and (3774). It had almost no coarse inclusions. There was little of this deposit surviving and finds included just four sherds of Roman pottery, suggesting a date from the mid-third to the fourth century, and a miniscule piece of coal.

Phase 2B

Ditch [3763]

Ditch [3763] was also located towards the south-east corner of the western end of Trench C (Fig. 4.13). It was cut into natural clay, and immediately underlay the present ploughsoil. It was cut at its western end by the shallow Ditch [3771] of Phase 4 and also at this location by the medieval Furrow [3720]. It had cut Gully [3767] on its northern side. A post hole or narrow gully terminal by its southern side, [3777] was perhaps an earlier feature but this was not unequivocally clear as there was no intrusion between these adjacent features. Ditch [3763] was traceable for 2m between the edge of the excavation trench to the east and the intersection with the features that cut it to the west. It was 1.1m wide by the edge of the excavation but narrowed to the west to c. 0.8m and survived to a depth of 0.29m being slightly deeper on its western side. It had steep edges and a u-shaped profile (Fig. 4.9 no. 27). It had a single fill, a heterogeneous mix of (mainly) dark reddish brown silt 5YR 3/2 and clay, particularly redeposited natural clay, (3762). It had a number of large stones on the south side of the fill near the base including a fragment of angular tabular flint 155 x 155 x 63mm, a similar sized fragment of New Red Sandstone with sub-rounded corners (probably an erratic) 155 x 150 x 95mm, a disaggregating fragment of basaltic rock 185 x 150 x 90mm and a fragment of chalk 205 x 130 x 80mm. These stones did not appear to have any regularity to their distribution and do not seem to have been post-packing or other structural remains. Also present were charcoal flecks and some burnt clay fragments. Finds comprised Roman pottery, animal bone and coal. Pottery types present suggest a late third to fourth century date for the filling of this feature.

Gully [3775]

Located by the eastern baulk at the western end of Trench C [3775] appears to be the terminal of a gully or shallow ditch (Fig. 4.13). It was of asymmetric form, as on the northern side it extended to a shallower narrow arm while on the south side it opened to the south-west to merge with another shallow gully [3773].

More substantive by the eastern baulk it was 0.7m in width and survived to a depth of 0.15m with gently sloping sides (Fig. 4.9 no. 28). Its straight northern arm was 1m in length and 0.4m wide, while the southern arm was c. 0.5m in length. Its fill was a fine homogeneous silt with clay (3774), 10YR 3/2.

Feature [3777]

To the south of Ditch [3763] by and disappearing into the eastern baulk of Trench C at its western end was a feature that was either a post hole or the terminal of a narrow gully [3777] (Fig. 4.13). As revealed within the trench it was oval in plan measuring c 0.32m by 0.34m and cut to a depth of 0.22m. It was regular in plan with steep sides but if a post hole it was (as extant) not deep and had a flat base (Fig. 4.9 no. 29). It had a dark brown silt with clay fill (3776) 10YR 4/2-4/3 similar to but not as dark as (3766). Animal bone was present in this fill.

Discussion

The linear features [3767] and [3763] follow the same alignment and were cut to the same depth; the latter appears to be a replacement of the former, which it cuts. These two linear features are aligned with the two post settings [3755] and [3761] to the west, where again the latter cuts the former. It appears that a linear feature and an associated post setting near its terminal are both replaced with like features immediately to their south. The available dating evidence is consistent with this likelihood. Further, these features mirror the alignment of the pathway to the north. The post settings [3031] and [3033] appear to relate to this layout. Given the truncation that has occurred these four post settings will once have been substantial and may have held posts for fencing and gates related to the pathway, etc. with associated drainage channels. Fencing or hedging may have run alongside [3767] and [3763], with traces lost through truncation by subsequent ploughing. The short length of shallow gully [3775] is ascribed to this Phase on the basis of its shared alignment with [3767] and [3763]. It may well be a drainage gully and define an access-way controlled by a gate. Feature [3777] may to be contemporary.

[3767] appears to have silted up with the contemporary topsoil seen also in other nearby features. Contrastingly Ditch [3763] appears to have been intentionally back-filled with a mixed deposit including the cobble sized stones while its associated post in feature [3761] may have been extracted at this time. These actions probably coincided with the rearrangement of the area in Phase 3.

Slot/Gully [3538]

A short length of a slot or gully-like feature [3538], orientated approximately east-west, was excavated at the western end of C, underlying the Furrow [3716] (Fig. 4.12). It extended beyond the western limit of excavation while its eastern end was not clearly traced in the time available. The feature was excavated over 0.84m, was 0.2m wide and survived to a depth of 0.1m. It was of regular form and u-shaped in profile. Its fill was a mid- to dark grey silt with loam (3537). Animal bone and fired clay was present in this fill.

Post Hole [3522]

This feature lay by the western baulk of C, mid-trench (Fig. 4.12). Oval in plan it measured 0.3m by 0.22m and survived, despite truncation by Furrow [3716], to a depth of 0.36m.

Discussion

The post hole [3522] might well be associated with Slot [3538]. Neither feature is well-dated but the alignment of the slot is consistent with that of the hard surfacing (3500)/(3502) just 1.35m to the north and so an association with this phase is implied.

The western side of Trench C: Phase 3

During Phase 3 the western area of Trench C was again in use for crop processing. Four oven flues on a broadly similar alignment can be ascribed to this period, forming a row, though they were probably in use at different times. An area of surface scorching and a further oven structure appear likely to belong to this period, with a gully bounding the four ovens also of this era.

Oven Flue [3751] and stoking-pit [3752]

This oven was located on the south side of Trench C, to the east of Ditch [3718], and south of Oven [3739]/[3780]. This was a stratigraphically isolated feature revealed immediately below the modern ploughsoil. The feature comprised a rectilinear pit or flue on the north-eastern side, [3751], which had contained the fire, and a contiguous shallower scooped stoking-hole [3752] to its west (Fig. 4.14). The fire-pit/flue [3751] was of very regular form, measuring 0.8m by 0.54m. It had straight, near vertical, sides on its longer axis and steep sides at either end. It survived to a depth of 0.5m below the current base of the ploughsoil, being deepest

at the end opposite the stoking-pit, though its base was essentially flat (Figs. 4.9 no. 30 and 4.15 no. 31). Its lower depth had been cut into natural chalk, but the upper level cut through the natural clay which showed burning on the sides of the feature, scorched a strong red on the northern side.

The stoking-pit was less regular in plan, with a semi-circular terminal on its western end and straight sides measuring c. 0.65m by 0.52m. The cut was c. 0.25m in depth and had only cut the natural clay, not reaching the chalk. These edges were also steep and again this cut had an essentially flat base, sloping downwards at the junction with the fire-pit/flue (Fig. 4.15 nos. 31 and 32). The fill of the stoking-pit (3703) was a fine dark greenish brown silt with clay, 10YR 4/4 - 2.5Y 4.3, with charcoal flecks (similar to nearby fills (3766), (3776) and (3772)). This fill contained three stones in the central area at the top. These stones comprised a semi-rounded erratic 175 x 130 x 60mm, an ironstone fragment 120 x 80 x 44mm and a much smaller chalk fragment. The fill of the fire-pit/flue comprised a single deposit, (3726), which was a contrastingly highly mixed deposit. There was no sooty carbonized layer at the base of the cut, in contrast to the other ovens of this Phase. (3726) was a mix of mid- to dark brown silt (10YR 4/4), yellowish brown clay (10YR 5/8), burnt clay (2.5YR 4/8 and 5YR 4/4) and coarse inclusions, including chalk fragments together with charcoal flecks. The mixed and mottled nature of this context extended through its extent with no layering. As a consequence of the very mixed nature of (3726) it was decided it was not worth retaining a sample for environmental analysis. Only eleven sherds of pottery came from the flue and stoking-pit and were of mixed Roman date with four or five sherds of Saxon date.

Discussion

The regular but short, comparatively deep, nature of the fire-pit/flue [3751] of this oven contrasts with the morphology of the three other ovens of this Phase to the north. However, like those three it had a stoke-pit on its west side, was cut into natural, and its edges show exposure to high temperature. The silt (3703) filling the stoke-pit would seem most likely to represent the contemporary soil washed into the cut [3752]. Notably it lacked burnt clay inclusions so presumably dated to a time before there was much burnt and fired debris around as this would likely have been present as a trace; accordingly this oven may have been in use and its stoking pit filled earlier than the others in this area. The stones in the top of (3703) seemingly represent a final filling, perhaps

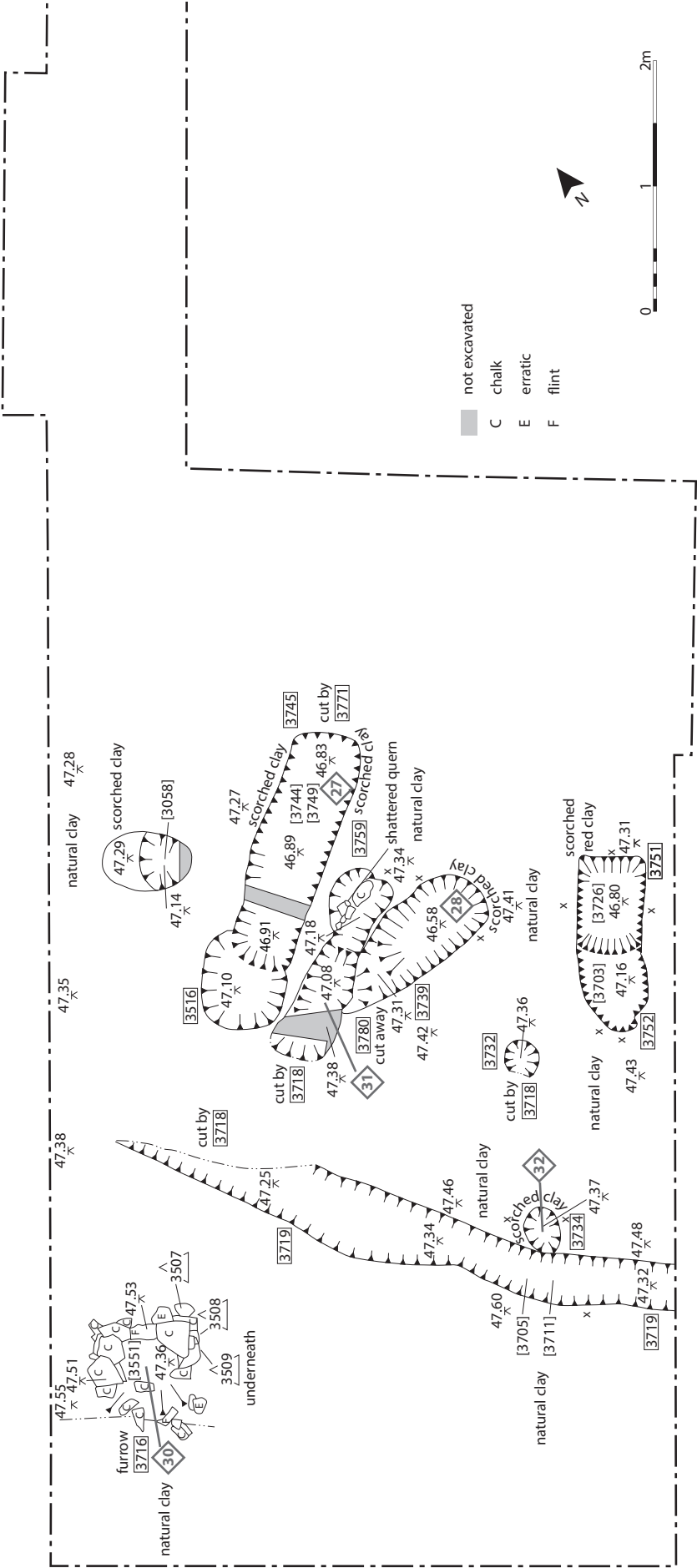


Fig 4.14 Plan of Trench C, western end, Phase 3.

deliberately placed following sinkage (rather than represent post-packing). The mixed nature of the fill of the fire-pit/flue suggests that this is debris from collapse of, or intended backfilling of the feature with, super-structural elements and surrounding material perhaps some while after use. If this was in the Saxon period or if sinkage occurred by that time this may explain the few Saxon sherds from this filling.

Oven Flue [3781] and Flue Terminal [3759]

This oven lay near the centre of the western part of Trench C (Fig. 4.14) between two others: [3739]/[3780], which partially cut it on its southern side, and [3745]/[3516] to its north. It had been cut on its western side by the Ditch [3718] of Phase 4. The latter had fully removed the stoking-pit for this oven for the three other ovens in this area had stoke holes on their western side and no element of [3781]/[3759] appeared to have served this purpose as it showed scorching of its sides and floor throughout. The surrounding natural clay also showed reddening due to heat, particularly on its northern side. This was a sausage shaped feature in plan with a slight constriction along its length at the point where it shallowed to a terminal bowl [3759] on its eastern side (Fig. 4.14). It survived to a length of c. 1.7m by 0.46m wide; its lower central area was c. 0.27m below the base of the current ploughsoil, but its shallower eastern terminal just c. 0.14m in extant depth (Fig. 4.15 no. 33). It had steep sides and a flat base. Two chalk blocks were present on the northern side of the Oven. The western end of the feature, cut away by the Ditch [3718] was not fully excavated as a small scale baulk was retained. The main fill of [3781] was a mixed silt with unfired clay and burnt clay fragments (3750); while to the east the terminal bowl [3759] contained a similar mixed fill (3756) but with less burnt material. This deposit contained a comparatively large block of chalk 225mm by 125mm in a central position and some fragments of Spilsby Sandstone. The latter fragments had tumbled in from a side lining of the flue (3758) with quern fragments (Quern C5) in this stone that were disaggregating, probably due to shattering through exposure to heat; some were conjoining. Below (3750) a thin dark brown mainly silty fill (10YR 3/2) with significant carbonized material (3757) lay over the base of the feature. This was a somewhat mixed deposit also including burnt clay. A sample for environmental analysis was collected from this context. The only pottery from this oven was a single sherd of Roman grey ware.

Oven Flue [3739] and Stoking-Pit [3780]

This oven lay east of ditches [3719] and [3718] and was the most southerly of a group of three ovens close-by each other, comprising [3759]/[3781] and [3745]/[3516] (Fig. 4.14). [3739]/[3780] was later in date than [3759]/[3781] to its north, which was of similar proportions. Sausage shaped in plan [3739]/[3780] was aligned north-west to south-east with a small shallow stoking-pit at its western end [3780], with the contiguous oven flue designated [3739]. Overall the feature measured 1.6m in length. The flue was 1.2m by 0.6m and survived to a depth of 0.3m below the base of the present ploughsoil. It had steep, near vertical, sides and a flat base, excepting a slope down from the stoking-pit on its north-west side (Fig. 4.15 nos. 34 and 35). The rounded distal terminal of this flue and the sides and base (all natural clay) displayed strong scorching through high temperatures. The surrounding natural clay also showed marked reddening due to heat. Four contexts were encountered filling this feature. The lowest fill concentrated mainly at the flue end was a thin mid- to light grey ashy layer with silt (3746) from which a sample for environmental analysis was collected. Above this was a deposit of burnt red-chestnut clay fragments (2.5YR 4/6-3/6, 5YR 4/3) and silt of mid-brown colour (3738); charcoal flecks and rarer charcoal fragments up to 10mm occurred. Over this layer at the flue end was a cluster of oyster valves (3737) (cf. Chapter 8), and over these and filling the stoking-pit was a dark brown silt (10YR 3/1) with some pockets of burnt clay (2.5YR 3/4-3/6) together with comparatively large fragments of charcoal 50 x 20 x 20mm, 35 x 20 x 15mm, 25 x 15 x 12mm 30 x 15 x 2mm (3710). Some fragments of chalk, of unusual size were recovered from this fill 280 x 120 x 110mm, 260 x 130 x 120mm, 100 x 50 x 50mm, two fragments join so seem likely to be from what was originally a larger stone associated with this feature. Fill (3710) yielded pottery sherds and coal. Overall, a small amount of Roman pottery was recovered from this feature.

Discussion

Oven [3759]/[3781] was probably replaced by [3739]/[3780] quite soon after the former was abandoned, on the basis that they are of similar scale, location and morphology. The ashy layers at the base of [3739] and [3781] relate directly to the use of these two ovens. The environmental samples produced small to modest sized charred plant, grain and weed seed assemblages.

Both features contained some significant finds. The remainder of the fill of [3739]/[3780] appears to be a mix of the contemporary soil (the dark silt) with

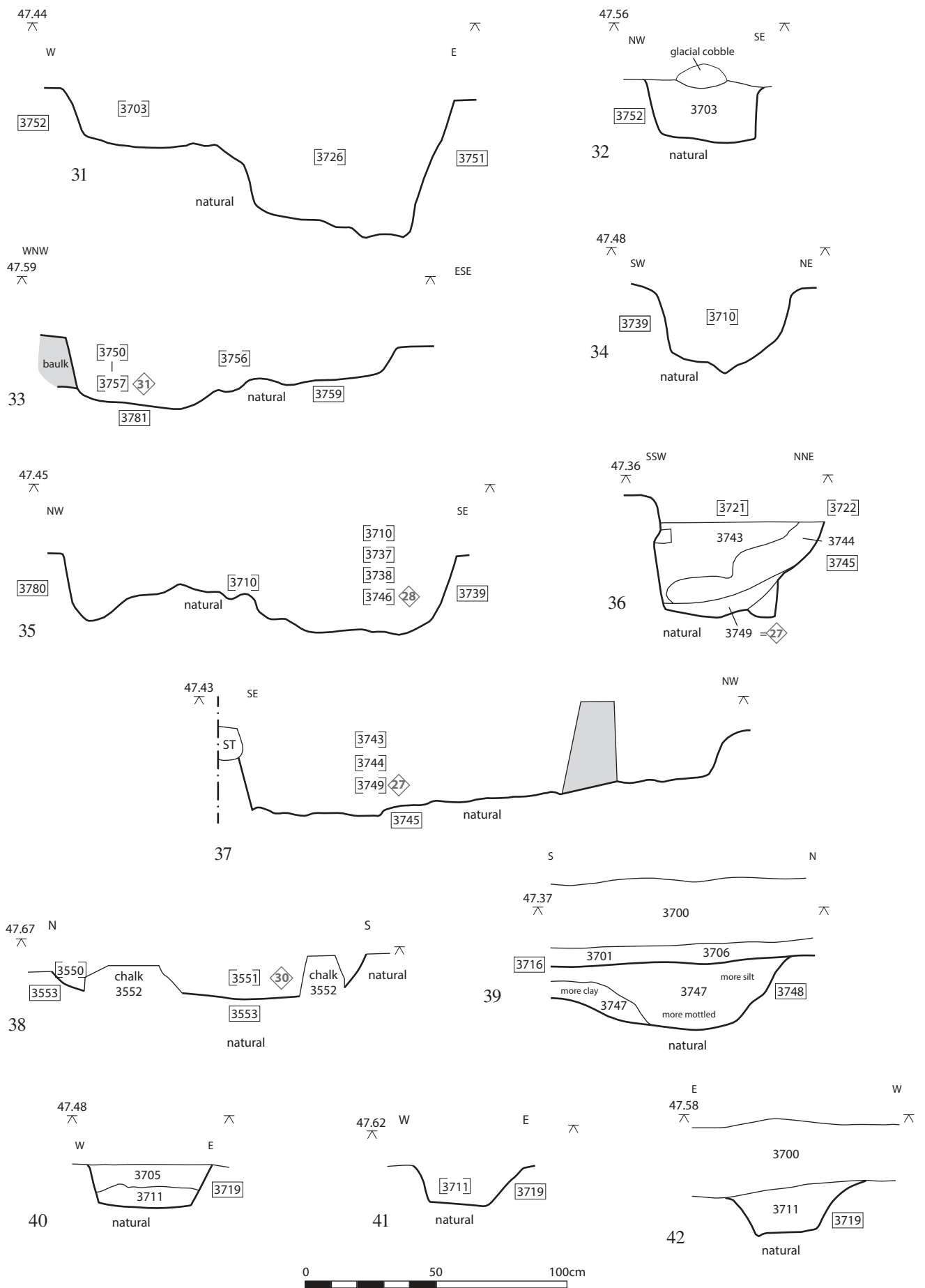


Fig 4.15 Section drawings and profiles, Trench C.

elements of burnt clay from the superstructure of the oven or possibly its neighbours. The chalk fragments found within both oven flues near their terminals may have been a part of the oven superstructures, though not as a prop or pedestal as they do not display exposure to heat. Alternatively these fragments may have been dislodged from the Phase 2 pathway and come to rest within these abandoned ovens. The cluster of oysters in the fill of [3739] is most likely a dump of waste following consumption; it is worth bearing in mind that oyster consumption can be associated with religious practice and ritual and so their presence in a feature with heat and transformative aspects may not have been random discard. The quern fragments and chalk blocks on the side of [3759] are more certainly part of the structure of this feature on its northern edge. In the case of the quern fragments these were fairly certainly of a structural purpose when the feature was in use as they were scorched.

Oven Flue [3745] and Stoking-Pit [3516]

This oven comprised a comparatively long deep flue and a rounded stoking-pit which lay at its western end (Fig. 4.14). It lay immediately to the north of Ovens [3781]/[3759] and [3739]/[3780], and, as with these features, was exposed following the removal of the base of the modern ploughsoil. The Flue [3745] had been cut at its eastern end by Gully [3771] and on its western side the stoking-pit [3516] was cut by Ditch [3718] (both of features of Phase 4). It was later than the hard surfaced pathway (3502)/ (3740) as it had cut this layer on its northern side. The flue [3745] was rectangular in plan with quite square terminals. It measured c. 2m by 0.6m on an approximately east-west alignment. It was c. 0.47m deep, having been cut through the natural clay to chalk and sloped slightly to the east. Its sides were steep and its base relatively flat (Fig. 4.15 nos. 36 and 37). The lowest fill of this feature was a charcoal and clay mix (3749) broadly 10YR 4/2 but with mottles of grey and black. Above this was a layer with much burnt clay (3744) 2.5YR 5/8 and 7.5YR 4/4; it included a large chalk slab of irregular form 250 x 175 x 75mm (with the top and bottom reflecting its natural jointing) which lay flat towards the bottom of (3744) sitting on (3749). The top fill of this flue was (3743), a mix of silt and clay, greyish brown 10YR 4/3 and 7.5YR 5/4. Towards its eastern terminal several large chalk fragments were present around the edge of the flue, near the side of the cut, some way down within (3744). Finds from (3743) included coal.

The stoking-pit [3716] was bowl-shaped in form, roughly circular in plan, measuring c. 0.56m in diameter. It had regular sloping sides descending to a flat base, which survived to a depth of c. 0.27m (Fig. 4.9 no. 23). The fill was a single context (3512)/ (3741), being a dark brown silt 10YR 3/2 - 4/4 similar to that filling stoking-pit [3752]. It had red flecks and fragments of burnt clay and a distinctive charcoal flecking. This fill yielded pottery and animal bone. Overall 34 sherds of pottery were recovered from [3745] and [3516]. A sample for environmental analysis was collected from context (3749).

Discussion

Oven [3745] was of very regular form and comparable to the earlier Oven Flue [3511] in terms of scale, morphology and location. The chalk fragments encountered towards the distal terminal of the flue were presumably either part of the superstructure of the feature that had tumbled in following its abandonment or were eroded from the adjacent hard surfacing of Phase 2, or were ground consolidation at the advent of Phase 4. As with similar fragments of chalk in the adjacent ovens to the south (cf. above) these items showed no sign of having been exposed to heat. The stoking-pit [3716] was evidently filled with the contemporary soil at the time while the flue had collapsed debris from the superstructure of the oven as it contained much burnt clay, etc. This pattern closely reflects that seen with Oven Flue [3751] and stoke-pit [3752] likewise of this Phase. This feature, as with [3751]/[3752] had a stoke-pit cut to approximately half the depth of the flue.

Oven Structure (3552)

A small oven structure (3552) survived as a short u-shaped build located in the north-west corner of C near to the northern baulk (Fig. 4.14). It had been constructed by cutting into the hard surface (3500) of Phase 2 down to the natural underlying clay. Stones from the hard surface were probably used to form its structure. Once probably more substantial, it had been cut on its western side by the medieval Furrow [3716]. Constructed mainly of carefully dry-laid, comparatively large, chalk blocks it measured c. 0.47m across the base of the 'U' with the projecting structural arms c. 0.25m and 0.15m in width, on the north and south sides respectively, with the 'U' open to the south-west (Fig. 4.15 no. 38). The area for the fire was approximately 0.4m across. The chalk blocks were angular fragments, the product of natural jointing, for example 140 x 130mm and

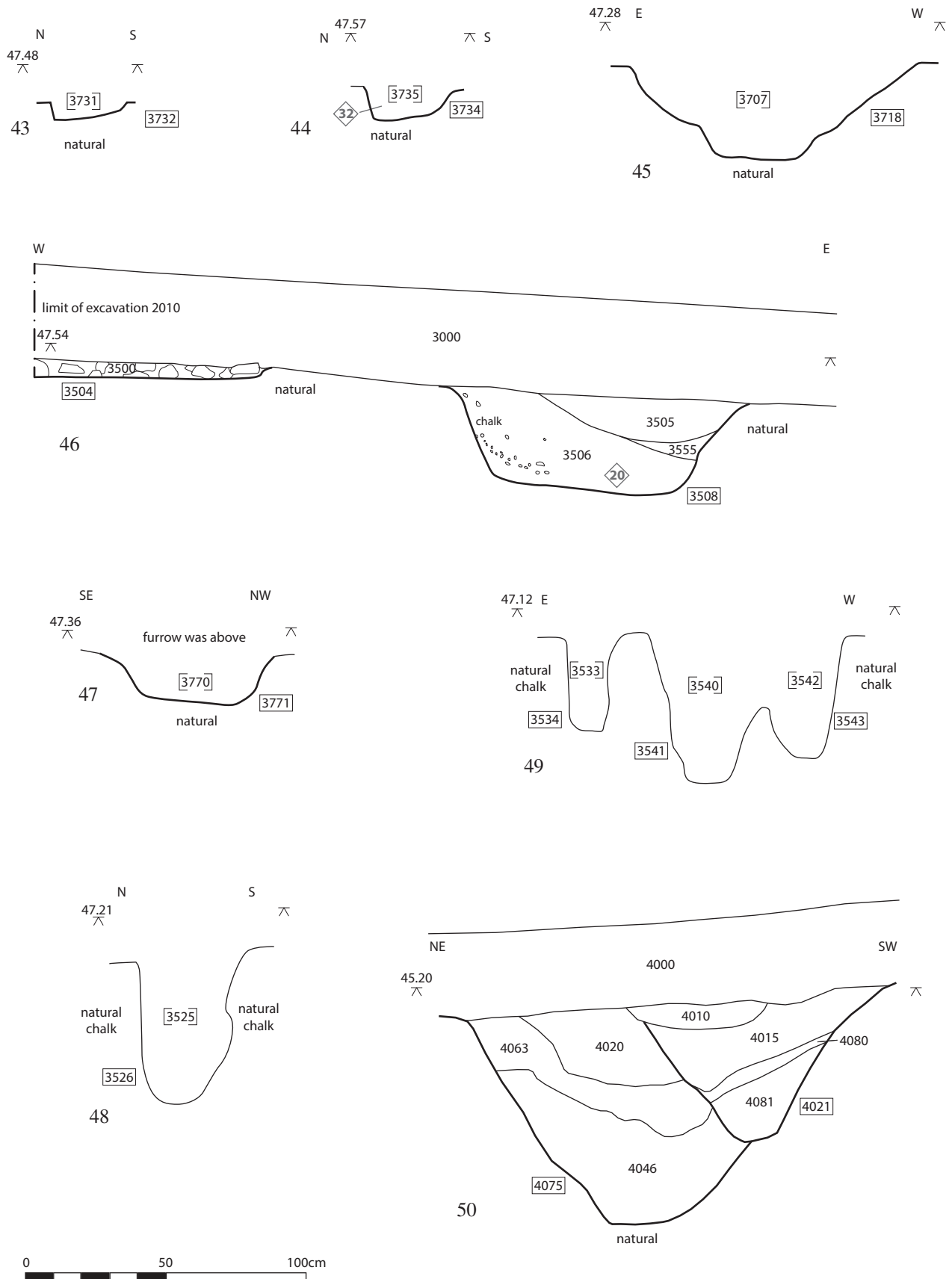


Fig 4.16 Section drawings and profiles, Trenches C and D.

120 x 120mm, but weathering had resulted in some degree of shattering. Some elements were large flints and erratics. The structure was mainly of one block thickness and survived to a height of 0.17m; there was though some coursing. A spread of smaller stone (again mainly chalk fragments) on its western side indicated disturbance at this end of the structure, associated with the medieval plough furrow. Incorporated into the structure were the rotary quern fragment (Quern C4), at its south-east corner and the rubbing stone (Hone 5) and the rubber stone (Stone 9) likely to have been associated with the former. The area enclosed by the 'U' was filled with a series of lens (3551) of alternating silty clay 7.5YR 5/4 and dark silt with ash and charcoal flecking and fragments up to 10mm; burnt clay flecks and rare fragments were also present up to c. 20-25mm. There was no direct burning and so if there was heat being used in this structure it will have been at a higher level, now truncated. A sample for environmental analysis was collected from this fill.

Discussion

Oven (3552), as encountered, appears likely to be the base of a larger structure, perhaps of semi-circular or horseshoe form, open fronted on one side. Similar forms are known from London (e.g. Perring *et al.* 1991, fig. 87), Carlisle (Caruana 1986, 174-5) and Long Bennington, Lincolnshire (Leary 1994, 14, fig. 15, feature 85), the examples from the latter two sites being larger and thought to be bread ovens. Its interpretation as an oven is based on its form and the lenses of ash and carbonized debris within its fill. It may well have been deliberately cut into an earlier feature (in this case the cut [3553] and its filling, the surface (3500) etc.) as this was the case with the ovens recorded at Trench D. Whether the quern (Quern C4) and rubbing stone (Hone 5) and the quartzite rubber stone were intentionally included within the structure of (3552) for symbolic or ritual purposes is impossible to say. The structure has an improvised character and in the context of relatively little readily available stone it is conceivable that items conveniently to hand were utilized, especially as they were no longer being used for their original purpose. The brick like form of the rubbing stone will have made it ideal for structural employment. This oven is of different form compared to the ovens with flues in this area of Trench C of this phase. It will likely have served a different purpose but likewise one involving heat. Considering this difference, it is perhaps significant that it lay on the other side of Gully [3719] from the other ovens of this phase.

Linear Feature [3719]

This gully lay towards the western end of Trench C (Fig. 4.14). It was traceable for just over 4.2m running south to north, bending slightly to the north-east. It continued beyond the southern limit of excavation while to the north it had been completely cut away by Ditch [3718] of Phase 4. It had cut the Flue [3511] of Phase 1 at its eastern end. Of regular form [3719] was c. 0.40-45m in width and extant to a depth of 0.16m, being u-shaped in profile (Figs. 4.9 no. 23 and 4.15 nos. 40-42). It had a mixed silt and clay fill (3711) with burnt clay fragments and burnt clay and charcoal flecks together with some chalk fragments up to 140mm, 10YR 4/2-4/4 and 5YR 5/8. Finds from this fill included Roman pottery, animal bone, an iron nail and Roman tile. The pottery types present date from the mid-second century onwards but are mainly third and fourth century.

Discussion

This linear feature had evidently been instituted as an organizational boundary. It was respected by the ovens of Phase 3 which were positioned near to it, but perpendicular, as if placed by a boundary to avoid intruding on more accessed locations. The only feature to cut [3719] was the ditch of the subsequent phase which itself looks to be a restatement of the boundary represented by [3719]. Although rather regular and slot-like in profile this feature seems unlikely to be structural for say a fence or sleeper beam given its slightly curvilinear nature. Its u-shaped profile reflects the fact it was cut into thick natural clay which retained its shape, so it is most certainly a truncated gully rather than a slot. The base of the feature dips slightly to the north so a drainage function is possible. The nature of its fill, containing fired and burnt elements, suggests it filled up subsequent to the ovens to the immediate east.

Small pits with burnt debris: [3732] and [3734]

Two small bowl shaped cuts [3732] and [3734] were present towards the south side of Trench C near to its western end (Fig. 4.14). These lay to the east of the linear cut [3719]. These features, revealed immediately on clearance of the modern ploughsoil, were similar in scale, morphology, location and fill. The more easterly cut, [3732], was approximately circular in plan measuring c. 0.27m in diameter and cut to a depth of 65mm. It had regular sloping sides descending to a shallow flat bottom (Fig. 4.16 no. 43). It was cut by the Ditch [3718]. Cut [3734] lay

around 1.1m to the west, immediately beside the linear feature [3719]. It was marginally larger than [3732], more egg-shaped in plan than circular. It measured 0.37m by 0.26m and was extant to a depth of 0.11m. It too had regular sloping sides descending to a flat base (Fig. 4.16 no. 44). The fill of [3732] was a mix of silt, burnt and unburnt clay, and charcoal (3731) closely similar in appearance and composition to (3733) the upper fill of [3734]; colours included 10YR 4/3-4/4 and 2/1. Feature [3734] had a lower fill comprising a thin layer of charcoal and soot rich material including some silt (3735), 10YR 2/1-3/1, 10YR 3/4-4/6. A sample of (3735) was retained for environmental analysis. No pottery was present in either feature.

Discussion

These two point features were shallow, though doubtless they had been larger but had been subject to truncation via ploughing. They seem unlikely to be post holes and it is probable that they are either the bases of small hearths or fire-pits, back-filled with resulting debris, or that they represent a different type of intrusion that filled with debris from the adjacent flues, perhaps when the structures of Phase 3 were cleared in readiness for the re-organization of Phase 4. They are not closely datable though [3732] was earlier than [3718]. Association with Phase 3 features seems likely given the nature of their fills.

Hearth base [3056]/(3058)

Near to the eastern end of the cobbled surface (3500)/(3502), on its northern side, a small hearth had been instituted [3056] (Fig. 4.14). This partially disturbed the cobbled surface and partly extended over the natural clay to the north of the surface. North of the surface it was manifest simply as scorching and hardening of the glacial clay (being red, orange and brownish purple). To the south the coarse materials of (3502) had been removed at this point and a clay mix (3058) had been laid to replace them. No structural elements were present; had there once been any it is likely they would have been disturbed by medieval or modern ploughing as the feature was revealed immediately following removal of the modern topsoil. The area of the hearth and associated scorching was oval in plan, measuring 0.7 by 0.46m (with c. 0.3m of the length comprising simply the area of scorched natural clay). The cut of this hearth, [3056], was shallow and no deeper than the depth of the cobbles. No finds were associated with this hearth.

Discussion

Whilst this feature was later than the Cobbled Surface of Phase 2 there was no other indication as to its date. Given that the area immediately to the south-west was used for the series of ovens and fire-pits/hearths during Phase 3 it is likely that this feature too belongs with that phase.

The western side of Trench C: Phase 4 Ditch [3718]

This ditch lay towards the western end of Trench C (Fig. 4.17) where it traversed the trench south to north, being traceable for a distance of c. 5.4m. It cut several features of the previous phase including the Ovens [3759]/[3781] and [3745]/[3516] and the Gully [3719] as well as the cobbled surface and its construction cut (3500)/(3502) and [3504]/[3553] of Phase 2. It was not itself cut by any other features. Ditch [3718] was a regular feature around 1m in width with sloping sides and a u-shaped profile. It survived to a depth of 0.32-0.40m, being better preserved at the northern end by the modern hedge where it had been less exposed to truncation from ploughing (Figs. 4.9 no. 23 and 4.16 nos. 45 and 46).

The fill of this feature varied somewhat along its course. At its northern end within the trench its lower fill was a dark brown silty clay (3506) 10YR 3/4-4/4 lying mainly on the western side of the feature with lenses of pea chalk representing wash/silting events. Above this was a more loamy-silt clay (3505) 10YR 4/2. A coin was recovered from (3505) RF 3502, being an issue of Valens of 367-375, as well as a hobnail and a flat broad curving strip of iron of unidentified function RF 3510. The top fill at this end was a silt (3507) 10YR 3/2. To the south there was a closely similar silty clay deposit on the western side of the cut with pea chalk (3723), equivalent to (3506). Above, the main fill was designated (3707); it included some burnt material that was secondary from the erosion of the ovens of the previous phase though it was mainly silt with a high clay content, 10YR 4/3, with occasional chalk fragments. A greater proportion of silt was present near the top and this reflects deposit (3507). This fill yielded pottery, animal bone, fragments of Roman tile (probably eroded from the Oven [3759]/[3781]), coal and another coin, an issue of Allectus, so a residual item in this context. Also present was an 'ingot' of galena. A sample for environmental analysis was collected from (3506).

Discussion

Ditch [3718] follows closely the alignment of the preceding linear gully to its west and would seem to be a restatement of that organizational feature. No features or contexts were later than this ditch (bar the medieval furrows). There is a suggestion from the drawn section (Fig. 4.9 no. 23) that the feature had been recut but equally the section (Fig. 4.16 no. 46) suggests this was not the case. Together with Ditch [3771] to its east, [3718] flanked an apparent access way.

Shallow Ditch [3771]

An arcing regular shallow ditch, late in the sequence at Trench C, cut pits [3033], [3755] and [3761], and the associated upper cut [3025], together with flue [3745] and Ditch [3763] (Fig. 4.17). It terminated to the north-east above Pit [3025] and extended beyond the southern baulk. It was traceable for 6m. The north-east terminal was rounded and the profile, as extant, was a shallow u-shape c. 0.26m in width (Fig. 4.16 no. 47). It had been truncated by the Furrow [3720] particularly on its more southerly section through the trench and here only the base survived. No other features in this area cut [3771] (the relationship with feature [3773] was lost (if there had ever been one) through interference from the furrow, though it is unlikely that this was later than [3771]).

The fill of [3771] was a dark greyish brown silt with clay (3770), 10YR 4/2, almost tenacious, with some angular chalk fragments up to 83mm but otherwise smaller, seemingly from bedrock (possibly dislodged from the Phase 2 hard surface), plus charcoal flecks and fragments up to 10mm (more common in this fill than in other nearby contexts), with some fragments of burnt clay evidently eroded from the earlier flue [3745]. This fill contained a range of cultural material, some doubtless residual, including pottery, animal bone, fragments of quern (Quern C6), coal and iron.

Discussion

Ditch [3771] followed a closely similar alignment to features [3718] and [3719] to the west and with no features or contexts later than this ditch (bar the medieval furrows) it can be seen as a partner to the more substantial Ditch [3718]. Together they form an access way, with an opening to the east, following the 45° turn of [3771] to a butt end terminal.

Unphased Features

Pit [3748]

This feature was located by the western baulk of Trench C, below the Furrow [3716] (Fig. 4.11). It was cut into natural clay and chalk and extended beyond the limit of excavation, hence its precise form was uncertain, as was its function. As present in Trench C it was of somewhat irregular form, sub-rounded in plan with sloping sides descending to a flat base. It measured at least 0.84m across (south-east to north-west) and 0.68 south-west to north-east though this 'width' continued beyond the limit of excavation. It survived to a depth of c. 0.25m below the base of the furrow (Fig. 4.15 no. 39). Its fill (3747) was a silt/silt with clay 10YR 4/3-4/4, with more clay content on its southern side. Finds from (3747) included three sherds of Late Roman pottery and one small fragment of coal. This shallow pit could perhaps represent a stoking-pit for a further oven, though it lacked burnt material within its fill. Alternatively it may be a post-setting, though it was significantly shallower than the post pits to the east ([3755] and [3761]).

Gully [3773]

Located near the eastern baulk at the western end of Trench C was a shallow gully [3773] (Fig. 4.12). The soil of this feature was examined but the feature was not excavated. It was curved slightly from north to west and was traceable for c. 2.4m between [3775] and the Furrow [3720] and Phase 4 Ditch [3771] both of which cut it. It was c. 0.46m in width and of regular appearance. Its relationship with the gully to its north [3775] was not discernible. [3773] was filled with a characteristically identical silt with clay (3772), 10YR 4/13-10YR 5/8, to the fill of [3775] but contained more chalk grit, with a concentration of chalk fragments near its intersection with Furrow [3720]; no finds were forthcoming.

Natural Features

In the vicinity of Flue [3511] and to its south an area of the natural clay till carpet (3724) was removed through archaeological feature excavation and in a designated area as a control. A cluster of nine small circular or sub-circular spreads of similar clay were observed (c. 0.2-0.36m in diameter) and seven of these were excavated, specifically features [3524], [3526], [3532], [3534], [3541], [3543] and [3545]. These proved to be pipe-like features resembling sheer-sided post holes cut into the natural chalk and all were filled with clay resembling the cover till (3724) 7.5YR

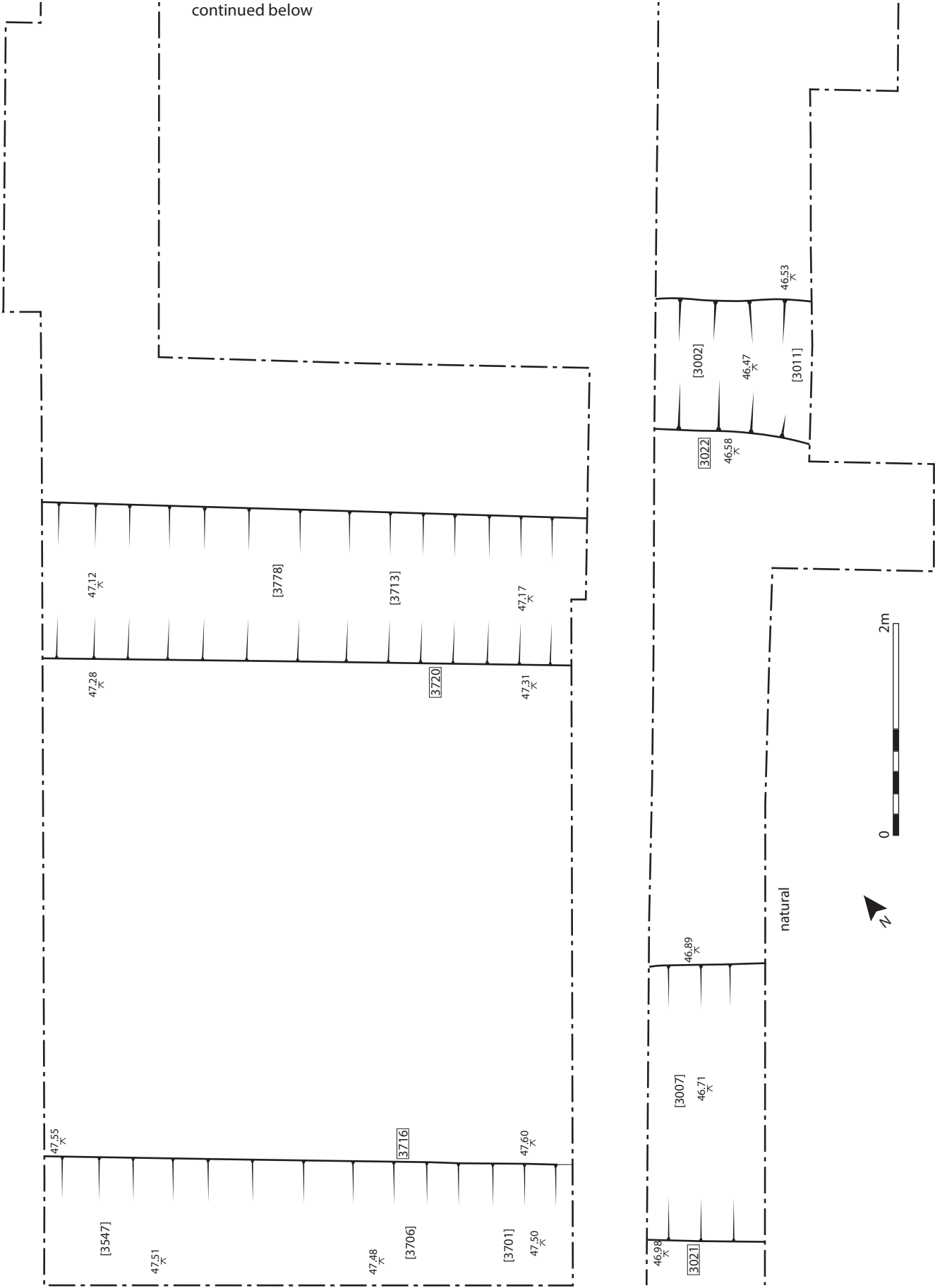


Fig 4.18 Plan of Trench C, Phase 5.

4-5/6 (Fig. 4.16 nos. 48–49. No finds were recovered and a sample collected from (3531), the fill of [3532], for environmental analysis essentially proved sterile. These features formed no clear pattern and were to various depths. Similar features were not encountered elsewhere during the excavations. They can probably best be interpreted as solution hollows of periglacial date, a recognized phenomenon of the Wolds, and other chalk landscapes (Dines *et al.* 1954, 76).

Phase 5

Medieval Rigg and Furrow features

Four furrows were exposed within Trench C, all aligned south-east to north-west and regularly spaced within the trench (Fig. 4.18). This alignment was consistent with the alignments of the furrows found in Trench A, the results of the geophysical survey and with the present field boundaries, which were determined by the roads to the north and east of Corner Field. With somewhat less erosion from modern ploughing having occurred in the margin immediately south of the modern hedge there was



Fig. 4.19 NELALHS member Brian West managing the spoil heap at Trench C in 2014.

some marginally better preservation of these features at that point. These features are described from west to east below. No further evidence for furrows was revealed north-east of the fourth Furrow [3022]; if the sequence had continued the next furrow would have been present near the south-western end of Trench B. The explanation for this is evidently the fact that the orientation of this mediaeval cultivation was from this point in the field on a south-west to north-east alignment, as indicated by the geophysical survey (Fig. 3.12). In terms of dating evidence all four furrows produced residual Roman pottery with [3720] yielding early medieval and medieval pottery.

Furrow [3716]

Furrow [3716] lay at the south-west end of the trench. Some 1.22m of its width lay within the trench likely to represent the larger part of the actual width of the feature, with 5.2m of its length revealed and fully excavated. This regular feature flattened out to a base c. 0.12m below the bottom of the modern ploughsoil. It had truncated the pit [3748], the post hole [3522] and the narrow gully [3538] which were located below it, plus the top of the natural clay (3724). The fill (3535)/(3547)/(3701)/(3706) was a brown silt with some clay c. 10YR 4/4, with a greenish tinge, largely free of coarse inclusions bar occasional very small fragments of flint and rounded chalk (c. 10-20mm), and thereby similar to the fills of the other furrows examined at Trenches A and C. Finds from the fill of this furrow comprised pottery, animal bone, fired clay and coal. There were 66 fragments of pottery, with Roman and post-Roman types present. There were 29 fragments of bone plus five larger pieces. Overall, the pottery and bone finds were noticeably small and abraded.

Furrow [3720]

The Furrow [3720] lay 5m to the north-east of furrow [3716]. Some 5.2m of its length was exposed and excavated. It measured approximately 1.5m in width and survived to a depth of c. 0.14m. It had cut several features: these being, pits [3025], [3755] and [3761], flue [3745], gully [3017] and the layer (3740). Its fill (3023)/(3713)/(3714)/(3778) was unsurprisingly a qualitatively similar silt to that within [3716] being brown 10YR 4/3 with a greenish tinge. Finds from the furrow consisted of generally abraded sherds of pottery and animal bone together with oyster shell, tile fragments, fragments of fired clay and coal. Pottery amounted to some 33 sherds of Roman and post-Roman date, including one medieval green-glazed

sherd. The Roman pottery included a large part from a painted Crambeck platter where the tilling had (presumably) incorporated material from the feature below: this sherd came from above Post Pit [3761]. Some 72 items of animal bone were present. A coin of Valens c. AD 367-375 was also recovered from the south end of this fill and a part of a sharpening stone (Hone 6) from (3778).

Furrow [3021]

Furrow [3021] was better preserved than the two examples to the south-west. It lay 5.2m to the north-east of Furrow [3720]; c. 1.1m of its length was exposed and excavated. It measured approximately 2.75m in width and survived to a depth of c. 0.19m. It had cut only one feature, the eastern corner of the likely oven flue [3050]. Its fill (3007) was again a brown silt 10YR 3/4. Finds from the fill comprised six sherds of Roman pottery and eight items of animal bone.

Furrow [3022]

This furrow survived as the narrowest of the four possibly due to erosion or perhaps as it was the last in the sequence before the cultivation turned 90° (so this was a medieval field edge). It lay 4.7m to the north-east of Furrow [3021]; c. 1.45m of its length was

exposed and excavated. It measured approximately 1.36m in width and survived to a depth of c. 0.11m. It cut Gully [3037] on its south-western side. Its fill (3002)/(3011) was again a brown silt 10YR 3/3-3/4. Finds comprised Roman pottery sherds and five fragments of animal bone, together with oyster shell. A coin of Theodosius I c. AD 388-395 was recovered from (3011).

4.5 Trench D

Introduction

The excavation of Trench D took place in August 2009 following the harvest of an oilseed rape crop. In other seasons (2008 and 2010) late harvests meant the choice of areas to examine was hindered by the presence of a standing crop, whereas the location of Trench D was chosen well in advance by Steven Willis and David Robinson in order to investigate the group of anomalies at this location that suggested a focus of activity, perhaps within an enclosure. This trench was rectangular in plan (10.1m by 6m) with projections to the north-west (5.35m x 3.4m) and north-east (3.3m x 1.5m) and amounted to an open area of c. 84 squares metres (Fig. 4.21). The ploughsoil within the trench was removed using hand tools, with metal-detecting and close scrutiny of the loose spoil generated, in order to maximize finds recovery. An absence of



Fig. 4.20 Excavation in progress at Trench D.

modern finds and recent 'rubbish' items was noted as a characteristic of the modern ploughsoil. In contrast to Trenches B and C no evidence of rig and furrow cultivation was encountered, presumably as it had been eroded through subsequent cultivation. From the first day, cleaning at the base of the ploughsoil revealed soot and charcoal rich soil, an indicator of the extensive spread of deposits of this kind that were soon found to lay across a large proportion of the trench. Four phases of activity were identified in the excavated sequence at this location. The first phase was represented by a linear ditch which crossed the trench from south-east to north-west; this was then re-cut and filled prior to Phase 2. In Phase 2 a substantive oven was instituted, surviving as a flue and stoke-pit. Phase 3 saw a second large oven inserted, in the northern area of the trench, with a number of contemporary gullies, and a laid clay surface over which burnt debris accumulated. Phase 4 saw a ditch on a south-west to north-east alignment fashioned and in use. There were no Post-Roman features or layers.

Phase 1

Phase 1A: Ditch [4075]; Phase 1B: Recut [4021]

For reasons of convenience and comprehension it is helpful to describe these ditch cuts under one heading, dealing with each in turn at the two points where they were fully sectioned (Fig. 4.21). Ditch [4075] was the earliest feature in the stratified sequence at Trench D. It extended the length of the trench, running from south-east to north-west, traceable for a distance of c. 15.3m. It had been cut through the natural clay till (4001) into the chalk bedrock. Approximately straight and regular in form, its top had been truncated through cultivation activities and was perhaps better preserved in the middle and northern sections of the trench than at the southern end where various indicators suggest more marked vertical erosion has occurred since the Late Roman period. [4075] had filled and been recut (Phase 1B) to a shallower depth, but on the same alignment, in the later Roman era. Ditch

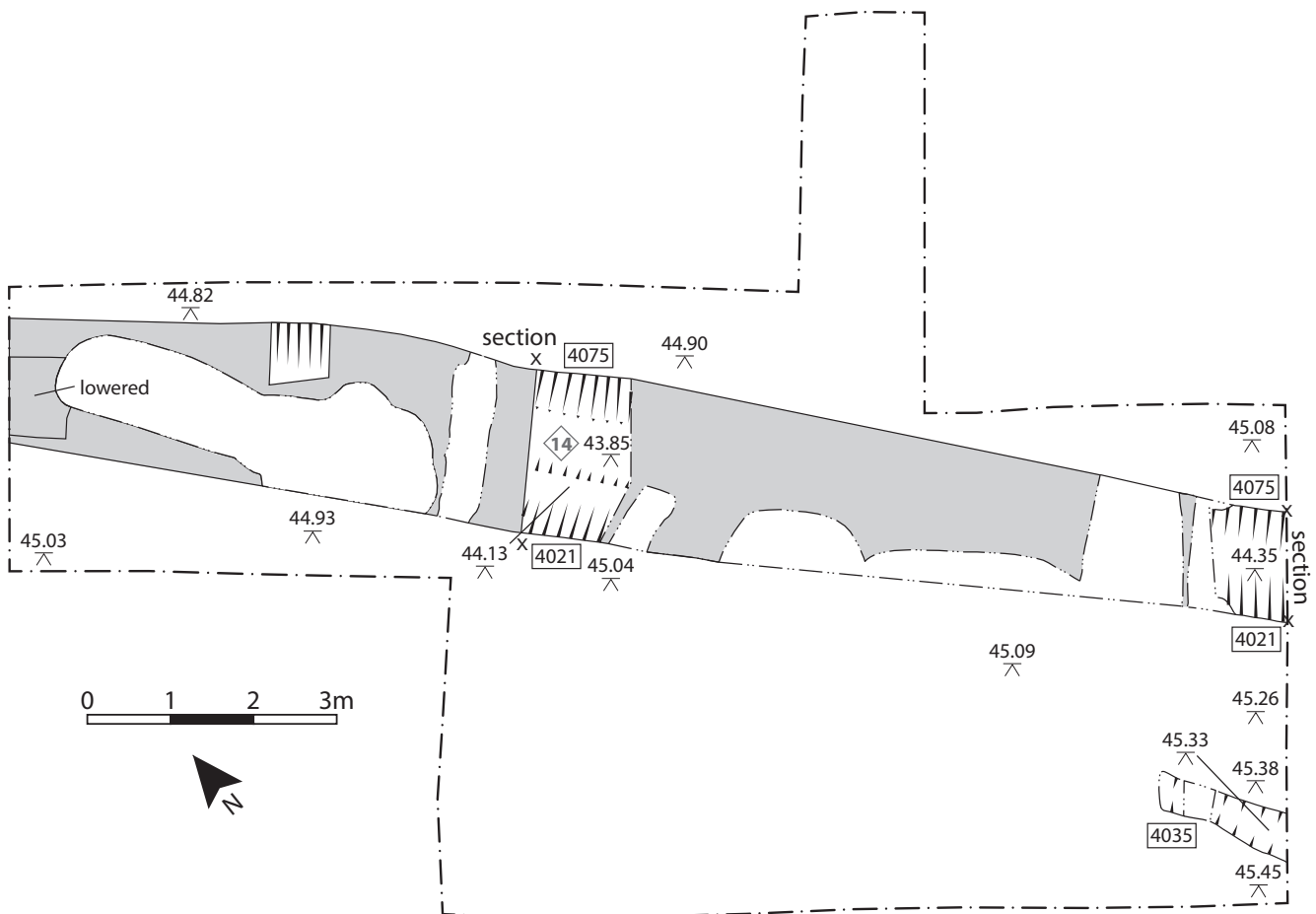


Fig. 4.21 Plan of Trench D, Phase 1.

[4075] and recut [4021] had then been cut by several features dating to the Late Roman era, including both of the large drying ovens excavated in Trench D. Perhaps in both cases, though more certainly in the case of feature [4028]/[4086], this was an intentional decision, presumably as it was simpler to place an oven in the former ditch, by excavating its softer fill, than to cut a fresh hollow into the chalk bedrock. Despite these subsequent intrusions into these two ditch features in the Late Roman period it was possible to examine [4075] and [4021] through excavation. Complete profiles were recorded in the southern and central areas of Trench D, together with limited sampling at two other selected locations further north in the trench, between the other intrusive features, the latter being aimed at establishing the character and continuance of the ditches through the course of the trench.

At the southern end of the trench, subsequent to the removal of the ploughsoil, an approximate 0.6m length of the ditches was exposed between the southern baulk and gully [4033], which bisected [4075] and [4021]. Following the excavation of [4033] at this point a length of 0.9m of ditches [4075] and [4021] was fully excavated. At this point the earlier ditch [4075] and its recut [4021] were c. 1.4m wide; here and elsewhere these features could not be distinguished separately in plan following surface cleaning due to their similar fills and a masking sinkage fill, combined with the dry summer conditions. At this southern end the original ditch [4075] survived to a depth of 0.8m below the present base of the ploughsoil. Here the profile was u-shaped (Fig. 4.16 no. 50). It had originally been approximately 1.3m wide though its western edge had been removed by the re-cutting activity. It contained three filling contexts. The lowest fill (4046) comprised a silty clay with infrequent chalk flecks and fragments, 10YR 5/4, evidently representing a washing in of the contemporary soil with its manifest high glacial clay component. This substantial fill was 0.3m in thickness at minimum and had entered the ditch from both sides. Above this silty clay was a layer, c. 0.2m thick, with common chalk fragments (up to 80mm in longest dimension) in a silty clay matrix (4063), 5YR 5/1, which could represent eroded bank material, the former up-cast from the cutting of the ditch. The top fill (4020) was a silty fill 7.5YR 5/3 with some chalk and flint fragments up to 50mm and survived to a depth of c. 0.27m. Pottery from (4020) consisted of five not particularly diagnostic items. Only two animal bones were present in this ditch, both coming from (4020), including a long bone.

At this southern end of Trench D Recut [4021] on

the western side of [4075] was a shallower cut extant to a depth of c. 0.54m below the base of the present ploughsoil (Fig. 4.16 no. 50). This cut was somewhat more v-shaped. Its lower fill (4081) resembled the silt clay lower fill of [4075] and so was presumably from the basic same source (cf. above). Above this was a thin intermediate level with more frequent chalk fragments (4080). The top fill (4015) was c. 0.23m thick and comprised silt with a loam component and occasional small chalk inclusions. A shallow silty deposit, 7.5YR 5/2, containing frequent abraded chalk fragments, extending along the length of the ditch fills, in a central strip c. 0.47m in width, (4010), evidently represents a sinkage filling as the earlier deposits within [4075] and [4021] settled (Fig. 4.16 no. 50). No animal bone was recovered from Ditch [4021] contexts.

Just to the north of the centre of the trench it was possible to open a further section across these features at a point where they were not interfered with by later features (Fig. 4.21). This section examined a 1.2m length of [4075] and [4021] where they were collectively 2m in width. Here, the original ditch [4075] survived to a depth of c. 1.13m below the present base of the ploughsoil (Fig. 4.24 no. 51). Again the profile was u-shaped and originally it had probably been around 1.7m in width, though here too the western edge had been removed by [4021]. It contained three filling contexts. On its eastern side a chalk fragment rich deposit (4084) appears to be largely a scree of weathered and eroded edge material. Across the bottom of the cut was a layer of silty clay c. 0.2m thick with some chalk fragments (4074), similar to (4046). Above this the main fill (4068) was not markedly dissimilar but in general had less frequent chalk, bar the upper part in the centre which again had some more frequency of chalk fragments but in the same characteristic matrix of silty clay (Fig. 4.24 no. 51). Again this fill had entered the ditch from both sides and much of it was presumably eroded contemporary soil with a high glacial till content, but perhaps with some eroded bank material. No pottery came from the lowest two fills but (4068) produced a group of twenty sherds of Roman pottery, albeit that these were generally small items. Amongst these a small rim sherd of Lezoux samian is probably from a Drag. 27 cup and so likely to date to c. AD 120-160. A bulk sample for environmental analysis was collected from (4068). A small group of animal bones also came from (4068).

At this location the recut [4021] on the western side of [4075] was again a shallower cut than its predecessor but at 0.85m in depth some 0.3m deeper than at the southern end of Trench D (Figs. 4.16 no.

50 and 4.24 no. 51). In width it measured c. 1.55m. As at the southern end the cut was somewhat more v-shaped than its predecessor, and it is likely that frost weathering during the first winters following its institution had altered the original profile to a more u-shaped form. The lowest fill (4083) was indeed largely composed of shattered chalk fragments. Above this was a silty clay fill (4082) characteristically similar to (4068), doubtless as it was derived from the same parent soil. The final fill (4012) was a compact mix of silty clay and chalk as the ditch passed out of use, possibly accelerated by backfilling, though this is uncertain. A small group of pottery sherds was recovered from (4012) along with seven pieces of animal bone.

Two further limited sample investigations confirmed the location, alignment and continuation of these ditches through the trench, being opened in places between intrusions from later features. One of these examined a part of [4075] on its eastern side, adjacent to the oven [4028], near to the north of the trench (Fig. 4.21). This was a 0.7m length 'bite' opened to a width of 0.74m into the fill of [4075]. This confirmed the position of the edge of this cut. Some 19.5 buckets of fill, here allocated the number (4067), were excavated to a depth of 0.42m with the excavation then halted so as to not disturb the structure of oven [4028]. At the extreme north end of the trench the fill of [4021] of Phase 1B was further investigated between the northern terminal of flue [4086] and the northern baulk (Fig. 4.21). Here 30 buckets of fill were excavated over a length of 0.6m by c. 0.94m wide, allocated the number (4064). Again this showed the continuation of the ditch feature(s) and enabled some recovery of finds, though the section could not be fully excavated and here no substantive edge was reached, though the overall width of the features here was c. 1.44m. Both (4064) and (4067) were yellowish brown silty clays, 10YR 5/4, characteristic of the fills of the original ditch and its recut elsewhere. (4064) had more frequent chalk fragment inclusions and whether this represented the incorporation of some reworked/eroded material from the fill of the original ditch cut [4075] was not established from the partial investigation at this point. The pottery from (4064) comprised one small sherd while (4067) yielded two small sherds, all three were Roman but not diagnostic of particular dates. (4064) also yielded a small group of animal bone. Overall, only small groups of pottery came from [4075] and [4021]; some items from [4075] were mid-Roman in date but the majority were types of late third to fourth century range, as was the case with those from [4021].

Discussion

Overall, the fill sequences of [4075] and [4021] indicate some episodes of early natural weathering of the chalk sides of the ditches and sustained piecemeal silting over a period of time, as might be expected of a boundary or enclosure ditch. The top fillings have more chalk present but not as a major component such as to firmly suggest that upcast chalk banks were levelled to fill the ditches, though this may have occurred. Judging from the drawn sections Ditch [4075] received material from both its sides whereas [4021] looks to have received more from the western side at both the northern and southern areas investigated, possibly as there was an up-cast bank on that side. The low levels of ceramic and faunal remains present together with the 'clean' nature of the soil suggest that this was a land management feature sustained over time and away from domestic and intensive activity areas during its period of use. Any banks may have had secondary barriers in the form of hedges or fencing. The scale of the ditches, particularly in terms of depth, suggest these were significant features perhaps defining settlement/activity/enclosure areas, rather than represent field boundaries.

The full-sectioning of the features at a mid-point of the Trench revealed these ditches to be broader and deeper than at the sample section 7m to the south, and their bigger scale and seeming better preservation at this point warrant explanation. The difference might be suggested to be a function of the ploughing regime in this part of the field. The creation of the chalk quarry to the north-east of Trench D in the 19th century has meant the plateau area to its west cannot be ploughed directly west-east (that is up and down the natural step in the field at this point (see Fig. 3.4 showing the field topography) as the ploughing has to skirt around the quarry; this has meant that for some 150 years the area to the south has experienced a sustained history of ploughing swinging around the quarry and down and off the slope from the plateau in the vicinity of the southern part of Trench D, whereas the more northerly side through that time has had ploughing only on the level of the plateau with, one might expect, less of an eroding impact. However, the present land surface between the northern, middle and southern end of the trench lies at a consistent height so this difference is not a function of erosion at the southern end. Comparison of heights reveals the ditches to be cut to a lower depth OD in the middle of the Trench and so the explanation for what must have been an intentional deepening of both the original ditch and its recut at their northern end

could be to direct rain water to the north-east corner along this feature, on what will have been the lowest side of its circuit if it were an enclosure ditch. Had there been a possibility to fully excavate a section across these features at the northern end of Trench D corroborative data may have been forthcoming. It may be borne in mind that it is an aspect of this Roman site that some linear features shallow and were not cut to a uniform depth.

From the geophysical survey of 2007 it had seemed that a linear anomaly in the location of ditches [4075] and [4021] was the side of an enclosure. Excavation established that the signals were strengthened by the presence of the two later ovens cut into the top of these ditches. No ditch turns were present in the confines of the area examined and the geophysical survey suggests this feature continues to the south-east for some 5-6m, though perhaps no more than 3m to the north-west before turning 45° to the south-west.

An extension to D was opened to the north-east c. 4.4m north from the southern edge of the trench (Fig. 4.21). This measured c. 3.3m (south-west to north-east) by 1.5m. No archaeological deposits were identified within this extension. This might offer some indication that [4075] and [4021] were a parameter boundary. A slightly sinuous linear feature, however, appears to run in a south-west to north-east direction immediately to the north of this extension according to the geophysical evidence.

It seems likely that [4075] was cut some when in the mid-third century, and if it was periodically cleaned out it might have been cut in the first half of the third century. Its contents suggest it had filled up by the late third century, or possibly the early fourth, with [4021] then cut, only for that ditch to fill some when in the earlier part of the fourth century. Ditches [4075] and [4021] are of apparently similar date to the ditches examined in Trench E to the north of D where an original ditch was recut on basically the same alignment as its predecessor. The ditches in Trench E are not a continuation of [4075] and [4021] but relate to a different boundary. It is likely these are part of a single overall scheme as the ditches are all parallel, while the re-cutting on the same basic alignment of an earlier ditch is seen in both cases. The re-cutting activities were likely to be contemporary on the basis of the finds groups.

Gully [4035]

A short length of a linear gully or slot [4035] was present within the south-west corner of Trench D (Fig. 4.21) cut into the natural clay. This regular

feature, aligned south-east to north-west, was u-shaped in profile. It measured around 1.6m in length, extending from the southern baulk to Ditch [4031] which evidently cut it; it did not continue on the north side of [4031]. Measuring c. 0.45m in width it was just c. 0.08m deep, as it survived below the level of the current ploughsoil, but it is likely to have been deeper originally, subsequently truncated by ploughing. It had been cut by Gully [4033] (Fig. 4.21). It had a single silty fill (4034) which yielded six fragments of animal bone and one very small sherd of Roman pottery, undiagnostic of date.

Discussion

This gully could not be directly related to any other features. It is possible it was contemporary with the late Ditch [4031] if its purpose was to drain water into that ditch, but that seems unlikely as there was no lowering in its base towards [4031]. Presumed to predate Ditch [4031] and Gully [4033] it is conceivable this feature belongs with the Phase 1 ditches, with which it shares a general alignment. Whilst its function is unclear it seems most likely to be associated with the ditches of Phase 1 than to be completely independent of any phased features at Trench D. It is possible [4035] turned to the west in the area subsequently cut through by Ditch [4031]; its slot-like nature holds the possibility it had contained a sleeper-beam.

Phase 2

Oven Flue [4058] and Stoking-Pit [4062]

A large oven of Roman date had been cut into the soil fills of Ditches [4075] and [4021] at around a mid-point within the main area of the trench (Fig. 4.22). It had been cut so that its flue [4058] aligned with the feature, although its western side cut into natural beyond the cut of these ditches. The stoke-pit [4062] lay at the northern end of the oven. This was approximately rectangular in plan with somewhat irregular sides sloping to a flat base. It measured an estimated 2.6m (perpendicular to the flue) by 1.5m and was c. 0.85m deep; two metres of the longer axis were excavated with the eastern edge unexcavated and masked by layer (4077) (Fig. 4.22). The western side of the stoke-pit and the base of the feature cut natural chalk, beyond the extent of the ditch cuts. The stoke-pit and the flue were sealed by layer (4077) and were not cut by any subsequent features.

Below (4077) the upper and main fill of [4062] occupying the central area of the stoke-pit and sloping down towards its base was a dark reddish brown silt

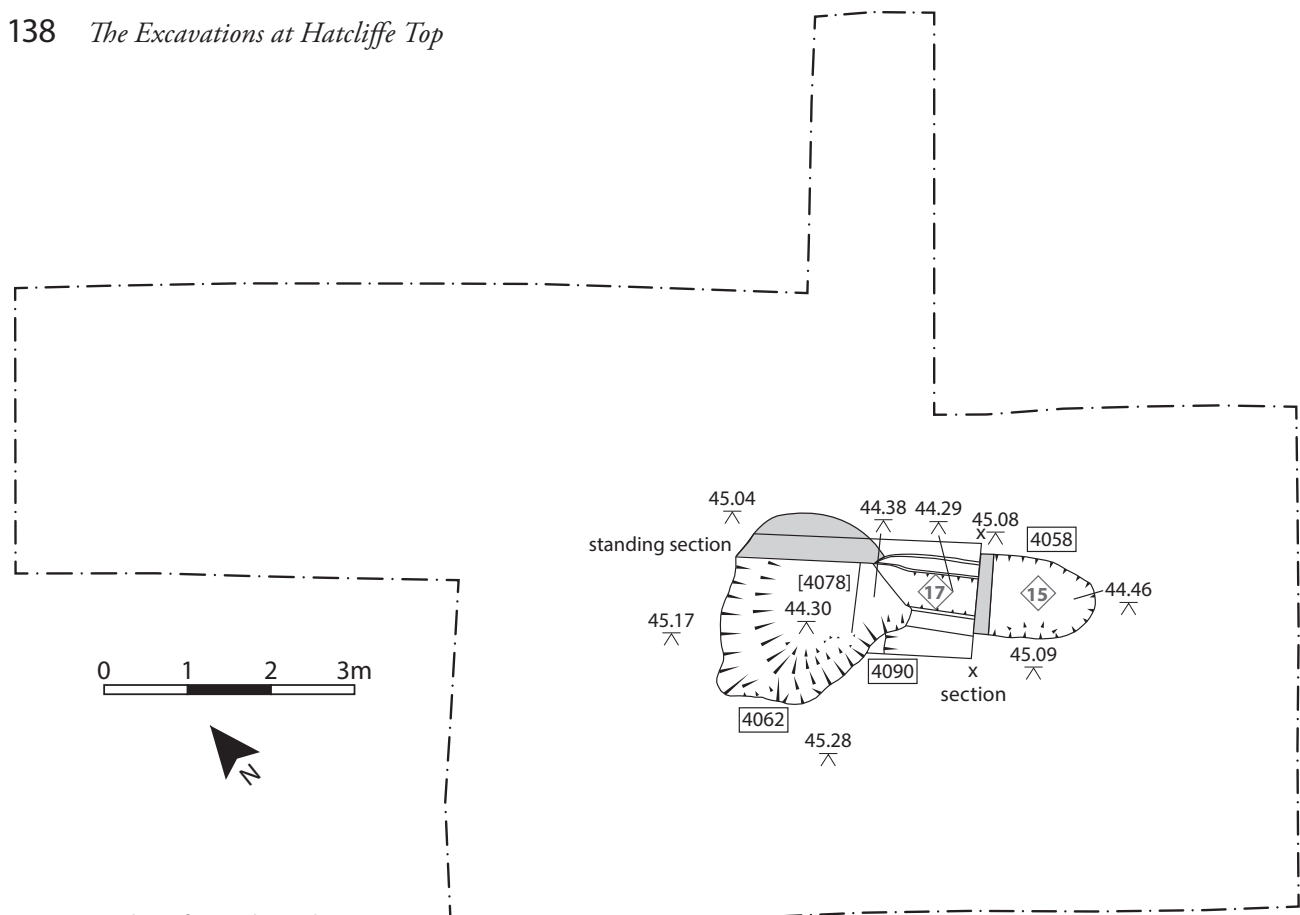


Fig. 4.22 Plan of Trench D, Phase 2.

with clay deposit (4019), 2.5YR 3/1. This fill was c. 30cm thick and contained pockets of soot and a charcoal rich lens (4048) and other indications of burning activity nearby when it was deposited. This material was probably derived in part from the use and abandonment of the oven and flue, and perhaps some of the structural elements of the oven once above ground level. Below (4019) was a silty layer (4099), 10YR 4/3, again sloping down towards the bottom of the feature; this was approximately 0.2m thick by the upper side of the feature, narrowing to 0.1m towards the base. Below this fill layer was a further silt with clay but in this case containing frequent small fragments of chalk (4100), 10YR 3/3. Again this was thickest by the side of the feature at c. 0.17m. It is likely that this fill represents eroded edge material and silt with clay entering the feature during or after its use-life. The lowest fill of [4062] comprised a comparatively thin layer of silt with clay (4101), being similar to the matrix of (4100) but lacking the chalk component (10YR 3/4); this deposit was around 0.07-0.08m thick and lay across the base of the cut, presumably being early wash or material eroded from the side of the cut. No large stone fragments or cobbles were present amongst these fills. Context (4019) was a fairly large deposit (89 buckets) and although it did not yield a great deal of finds it contained some range: pottery, small highly

fragmented sherds on the whole, including Swanpool items, amongst which was a cream-slipped mortarium rim, animal bone, oyster shell, coal, two iron nails and fragments from two other iron nails, burnt clay (14 amorphous fragments) and one item of slag. No bulk sample for environmental analysis was taken from these fills as they appeared to have a low potential carbonized element, in contrast to the associated flue.

The flue [4058] was well-constructed and of regular character. It measured c. 3m in length by 1m (at its distal southern end). It was c. 0.7m in depth below the top of the (4077) surface. At its distal (southern) end it had a rounded terminal with regular sides sloping to a flat base c. 0.5m in width (Figs. 4.22 and 4.24 no. 52). The mid-part of the flue (the 'firebox') and the channel to the stoking-pit were cut to the same depth as the terminal end but had been re-lined on both sides as excavation revealed that there was an outer original lining of clay that had been scorched and hardened to red behind a later edging of clay which narrowed the flue, itself fired with unoxidised margin and oxidized red surface (Fig. 4.24 no. 53). The inner lining had vertical sides at the bottom of the flue channel for around 32cm before broadening to more rounded sloping shoulders higher up (overall extant depth 0.55m), doubtless due to collapse/erosion of the upper part of the feature. The original lining survived to a similar depth. The original width was c. 0.8m

and the narrower later relined flue 0.4m in width. No lining or capping stones were present in the excavated flue or observed in the unexcavated clay linings. At the threshold to the flue there were two notable features. The margin between the stoke-pit and the flue had a carefully laid curb of stone fragments (4078), being the only stones of any size associated with [4058]/[4062]. They demarcated a slight step in levels between the base of the stoke-pit and the flue: the natural chalk had been excavated down to the same level at the floors of the stoke-pit and the flue proper but between them was a threshold step left in the chalk, lined on the stoking side with these stones (Fig. 4.22).

The fill of the distal (terminal end) of the flue (below (4056) cf. below) was a sooty, ash-rich, context (4057) with burnt clay inclusions and other debris. Context (4057) contained two animal bones and some fragments of fired clay. A bulk sample was collected from this context for environmental analysis. The central flue area (within the later relining) had three fills. The upper fill (4072) was a reddish dark brown deposit with much clay, with scorched fragments and presumably largely derived from the structure of this oven. Below this was a fired reddened clay and silt mix (4069) and a soot, silt and ash fill up to 15cm in depth (4073) with colours ranging from white (10YR 8/1), to yellowish brown (10YR 6/4) and black inclusions (7.5YR 2.5/1) depending upon material and containing occasional small erratic stone fragments up to 0.11m. The lowest fill was a charcoal rich layer, again black, (4070). A further bulk sample for environmental analysis was recovered from (4070), which contained fuel ash slag and burnt clay/clay earth, plus a fragment of ironworking slag (12grams). The only finds from contexts (4072), (4073) and (4070) came from (4072) which yielded animal bone and oyster shell. The upper extant 20-25cm of the clay relining, being contexts (4087) and (4088), and the original flue lining, being on the east side (4098), part of the fill of the earlier ditches [4075] and [4021] 10YR 4/4, and on the west (4089), the backfill of a putative earlier oven (see below), both sufficiently rich in clay to suitably hold their form as an edge to a flue, were excavated (Fig. 4.24 no. 53); these four excavated parts yielded no finds.

Inspection of the stones from the flue threshold (4078) revealed that surprisingly all but one were quern fragments, being Querns D1, D2, D3, D4 and D5, while the exception is also possibly from a quern (Quern D6). The six items occur in New Red Sandstone, Spilsby Sandstone, Charnwood Granite and Oolitic Limestone (see Catalogue of the Querns Chapter 7).

Discussion

Oven [4058]/[4062] was relatively well-preserved enabling detail of its character and use to be recovered. Its position in the stratified sequence at Trench D was also helpfully apparent. It cut the ditches [4075] and [4021] and the putative oven [4090] (see below) but was sealed by layer (4077)/(4056). The presence of Swanpool pottery items in the fill of its stoke-pit below the (4077) layer points to a Late Roman date for its use and abandonment which is consistent with its position in the stratified sequence. It precedes the other large oven in Trench D [4028]/[4086]. It had two phases of use as indicated by the original lining (Phase 2A) and its relining (Phase 2B) which narrowed the flue by about 50%. There is no indicator whether the relining occurred after one or more firings. There is no reason to believe the original flue was lined with large stone courses as with Oven [4086]; that flue was also significantly wider and somewhat deeper. Little information survives as to the superstructure of the oven and no structural stones that may have capped the flue were present. Stone types amenable to constructional purposes are not readily available at Hatcliffe Top bar brittle tabular flint and erratic cobbles so stone may have had a premium, so fragments from broken querns could have readily been put to a secondary use, as with this feature where they were laid to create a curb border to the flue at its junction with the stoking-pit. Some structural element may have sat on these stones, but if so there was no surviving trace. It is established that querns, and fragments from querns, were, during the Iron Age and Roman periods, often placed in locations that were symbolic, transitional/transformational or likely to have had some cultural significance or charge (Hingley 1992, 23 and 32; Willis 1999, 99) so the occurrence of a threshold formed from pieces of used querns is noteworthy. Was one transformational process (turning grain into malt for alcohol or storable food through parching) being marked by the token of another (insofar as the querns were directly associated with turning grains into food through milling)?

No other features are necessarily contemporary with oven [4058]/[4062] and its use and subsequent filling (Phase 2C). The gully or slot [4033] traversing the southern side of the trench could have been contemporary and if so will have assisted in demarcating this oven. However, there is no evidence to indicate that they were contemporary features and indeed [4033] seems more probably to belong to the following phase.



Fig. 4.23 David Robinson at work in the Stoking-Pit [4062] with Oven Flue [4058] in the background.

An Oven predating [4058]/[4062]?

On the western side of the cut of flue [4058] an apparent cut, [4090], at a right-angle to the flue, into the top of the natural chalk was observed filled with a silt with clay matrix (Fig. 4.22). This was observed as a straight edge for c. 0.38m before disappearing under the unexcavated clay surface (4077) of Phase 3. There is some chance this represents a flue cut by [4058], although there was no sign of burning within [4089]/[4090]. It is possible that this was not the work of human action but rather a natural erosion or solution hollow filled with the natural till (4001) (as the nature of the fill (4089) was similar to that material). However, the possibility that this was a feature, perhaps a flue for an oven, may be implied by the presence of a depression in the level of the clay surface (4077) (see below) west of, and in line with [4090] where perhaps (4077) had sunk into the stoke-pit bowl of a drying oven which (4077) masked. This would be possible if the oven and stoke-pit were around the same length as the two ovens excavated in Trench D, [4058]/[4062] and [4028]/[4086], that is, in excess of c. 3.4m. This possibility remains unanswered.

Table 4.6 The Sequence at Trench D (main features) with approximate dates

Phase	Context/Feature/ Feature Group	Approximate Date
Phase 1A	Ditch [4075]	Mid-third to early fourth century
Phase 1B	Recut Ditch [4021]	Early fourth century
Phase 1	Gully [4035]	Late third to early fourth century
Phase 2	Oven [4058]/[4062]	Mid- to late fourth century
Phase 3	Gully [4033]	Late fourth century
Phase 3	Laid surface (4077)	Late fourth century
Phase 3	Gullies [4004], [4006], [4042], [4091] & [4093]	Late fourth century
Phase 3	Oven [4028]/[4086]	Late fourth century
Phase 3	Ash layers (4002)/(4017)/(4024)/(4038)/(4049)	Late fourth century
Phase 4	Ditch [4031]	Late fourth to early fifth century

Phase 3

Gully [4033]

A fairly regular shallow gully [4033] was encountered on the southern side of the trench (Fig. 4.25). This linear feature, u-shaped in profile, extended across the trench for 6m, running from baulk to baulk. Around 0.34m in width along its south-western half, it was broader at c. 0.54m by its intersection with ditches [4075] and [4021] (where it also deepened, possibly as a function of the proximity to this earlier feature with its soft fills) before narrowing, perhaps through truncation, by the north-east baulk. [4033] was generally c. 0.1m deep (Fig. 4.24 no. 54). It contained a silty fill (4013)/(4032) which yielded a range of finds. The latter included pottery, coal, Roman tile, oyster shell, fired clay and an amount of animal bone fragments. The pottery comprised four small body sherds of Roman date including one from a Nene Valley type colour coated beaker. Much of this feature was excavated by the late Dennis Guerin.

Discussion

Gully [4033] cut the Ditches [4075] and [4021] and Gully [4035]. It was evidently not a structural slot given the fact that it was presumably open in order

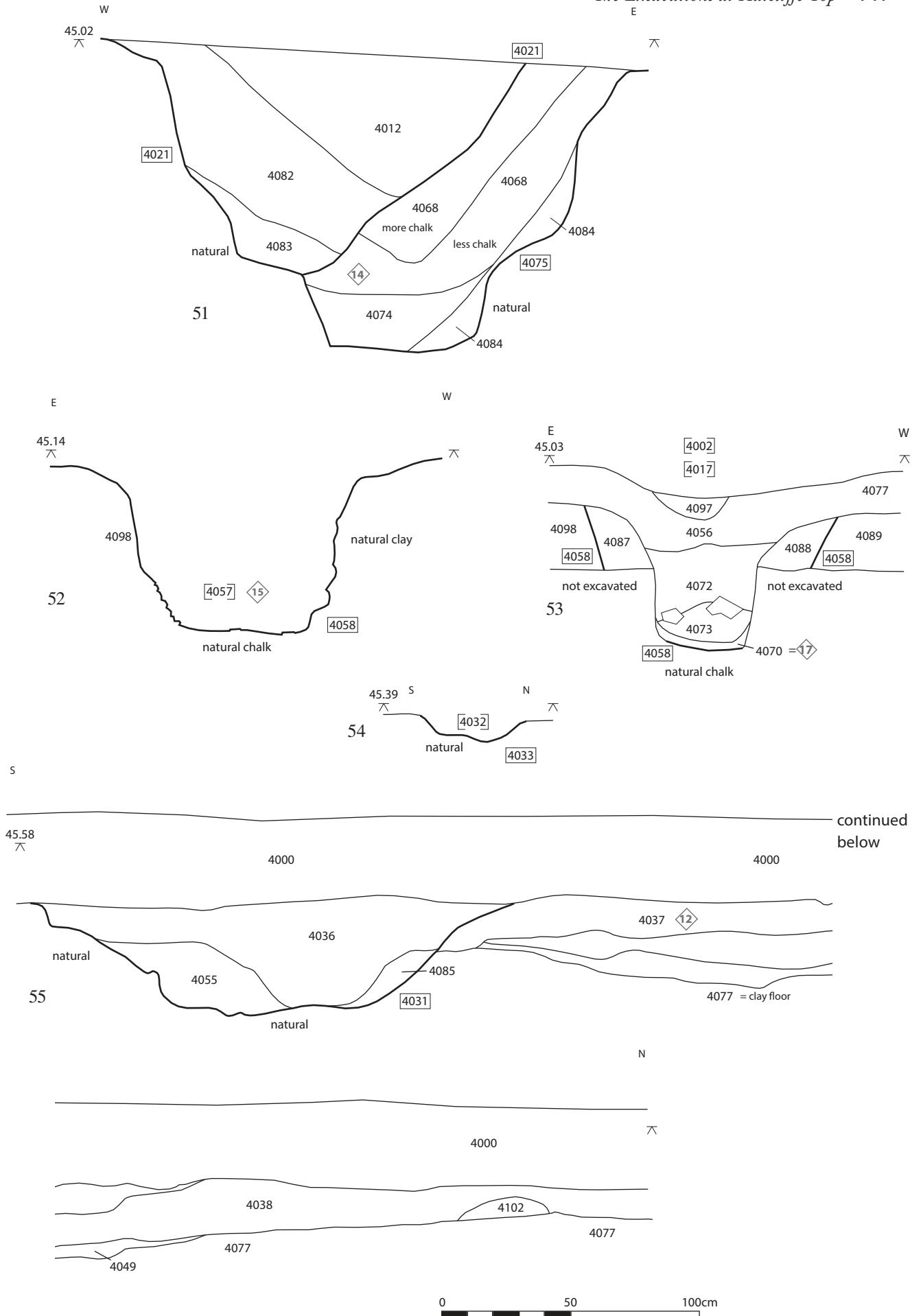


Fig 4.24 Section drawings and profiles, Trench D.

A spread of redeposited clay (4077) extended across much of the middle area of Trench D, comprising a surface contemporary with some of the later Roman period features at Site D. This was a strong brown to brownish-yellow clay with silt, 7.5YR 5/6, containing chalk flecks, chalk grit and some small chalk fragments. The layer extended to the south where it was cut by the Phase 4 ditch [4031]. To the north it continued as far as Gully [4006]. It extended over the oven and associated stoke-pit [4058]/[4062] (Fig. 4.24 no. 53), and to the south-west it continued beyond the baulk (Fig. 4.24 no. 55). It thereby covered an area of 5m by 5m within the trench. It was dished in profile, sloping down gently to the south and west, with a deeper depression north of [4031] (see below). At maximum its surface dipped by c. 0.35m (cf. Fig. 4.24 no. 55)). Within its saucer-shaped form a series of layers ((4002) etc.) had accumulated and been preserved due to their depth within the scoop.

Layer (4077) was only excavated where it crossed and had slumped into the oven flue [4058] and its stoking-pit [4062]. Over the flue [4058] where (4077) had



slumped, although comprising a single stratified unit, it was thought useful to distinguish this excavated element by allocating a separate number, (4056). Over the flue (4056) was found to be c. 0.2m thick, with (4077) to the west, where it had not slumped, evidently c. 0.16m in thickness (Fig. 4.24 no. 53). Over [4062] (4077) was of similar thickness and had not slumped as the pit had been backfilled largely with a mixed silt with clay (4019). The surface of (4077) included a dip near the south-west baulk, below (4038), measuring c. 1.1m by 0.8m, and another next to [4031], also by the south-west baulk (Fig. 4.25). The latter was a shallow linear depression in the surface of (4077) about 1.6m in length (but continuing beyond the south-west baulk) by 1.6m and a maximum of 0.17m deep (around 0.5m east of the baulk). A small scoop or post-hole base [4051] cut the surface at a mid-point between [4006] and [4031]. This feature was oval in plan measuring 0.3m by 0.24m, and cut to a depth of 0.16m below the top of (4077); however, it is quite possible it was actually inserted through later deposits over (4077) but not observed until it was defined against (4077). The fill of [4051] was a friable silt, dark olive grey, 10YR 4/4 (4050). An area of scorching c. 0.5m in diameter between the two depressions mentioned above suggests an activity involving burning/fire at some time prior to the build-up of deposit (4024)/(4038) over (4077).

The (4077)/(4056) layer is not closely dated, given only a proportion of it was excavated, though its place in the stratified sequence is clear, which is a useful guide to its chronology. Whilst some 55 buckets of (4056) were excavated there were few finds. From (4056) a Swanpool mortarium sherd was recovered along with two animal bones and some fragments of fired clay.

Discussion

This layer can be interpreted as a laid surface making-up the ground level in the Late Roman era to create a working floor. It post-dated the oven [4058]/[4062] and preceded the late ditch [4031]. It was bounded by the gullies [4006] and [4033] to the north and south respectively and these features appear to have been contemporary and part of the same organizational arrangement. It is possible this surface was laid down and screened by fencing or possibly hedging or palisading located within the two gullies (see below). Significantly, this area, bounded to north and south by [4006] and [4033] and potentially open on its north-eastern side was the area of strong soot and ash build-up in the form of deposits (4049), (4038), (4017), (4024) and (4002)/(4037). (4077) may have initially

been used for grain processing and perhaps threshing in the dry summer and early autumn months when its clay component would have been dry and firm, but whatever purposes it may have initially served it certainly became an area where ash was deposited, presumably rakings from oven [4028]/[4086] which lay to the north and which was evidently in use at this time. The presence of the possible post setting [4051] in a central position within (4077) is perhaps significant as post holes are rare at this site and a post at this location may have served a purpose related to the grain processing activities; the shallow depth of this feature though makes this interpretation questionable. The depression in the surface of (4077) could relate to sinkage into an earlier feature below this clay surface (cf. above, where this inferred feature [4090] is discussed further). If the area had previously been used for at least two ovens then ground make-up via the deposition of (4077) is readily understandable if the area was to be reused.

Parallel Gullies [4004] and [4006]

A straight regular gully [4006] lay on the north side of the clay surface (4077) which it demarcated. Cut into apparently natural boulder clay it extended from the south-west baulk in an easterly direction for c. 5.2m before terminating in a regular rounded end (Fig. 4.25). There was some variation in width but this was not less than 0.3m, and around that width for much of its course, broadening to a maximum of 0.5m around 1.5m in from the south-west baulk. This linear feature was u-shaped in profile, with regular sides, and was extant to a depth of c. 0.16m (Fig. 4.29 no. 56). It ran parallel with three other gullies to its north, most notably [4004] with which it appeared to form a pair. At its eastern end [4006] cut the fills of the stoke-pit [4062] and the earlier ditches [4075] and [4021]. It contained a friable greyish-brown silt with clay, 7.5YR 5/4 (similar to (4018), the fill of gully [4042]). Fill (4005) yielded a Swanpool mortarium and a group of animal bones and fragments including cattle teeth, small ribs and vertebra of a sheep/goat.

A similar linear gully to [4006], namely [4004], occurred a short distance to the north of [4006] (Fig. 4.25). This feature shows similarity in form, length, alignment and terminal point, and together these gullies could be a pair. Again cut into natural boulder clay [4004] extended from the south-west baulk in an easterly direction, with a length of 5.6m being revealed within Trench D. It terminated in a regular somewhat square end opposite the terminal of [4006]. There was some variation in width; this was quite consistent over its final 3.2m (between 0.34 and 0.47m) but nearer

to the south-west baulk the feature showed a slight meander between c. 1m east and 2.5m east where it was also broader. U-shaped in profile, with regular sides, [4004] ranged from c. 0.13m to 0.23m in depth (Fig. 4.24 no. 57). Whilst essentially parallel there was a narrowing of the distance between features [4004] and [4006] toward their eastern terminals, from c. 1.3m at the south-west baulk to 0.8m at their terminal. [4004] cut ditches [4075] and [4021] but no other features. It was filled by a friable dark brown silt with clay (4003) 10YR 3/3. Fill (4003) contained a surprising amount of animal bone for a relatively shallow narrow linear feature including cattle long bones and foot bones, cattle vertebra, cattle rib, sheep/goat long bones and two sheep/goat mandibles.

Discussion

Features [4004] and [4006] were evidently gullies rather than slots. Their bases were, overall, not horizontal and they show no post settings nor any sign of other structural elements. From their character it seems unlikely they were for fencing, wooden screens or hedging. They are likely to have been somewhat more substantial when in use but have been subject to truncation though ploughing. [4004] dips consistently to the east over its final 4m, presumably intentionally reflecting the slope of the natural topography. At its western end within Trench D [4006] is more horizontal but the latter 2.5m to the east sees a similar dip as with [4004]. A drainage function for these features is possible. There is no certainty that they were precisely contemporary, and one may be a replacement for the other. The existence of the shorter adjacent gullies [4042], [4091] and [4093] may also be significant. The features terminate at the same easterly position, more or less corresponding with the extent of clay surface (4077) which [4006] demarcates. The strongest likelihood therefore is that they represent side gullies to a pathway between two functional areas, probably for humans rather than to channel animals. Hard surfacing, as seen in Trench C at its western end, may have been laid between the gullies but since lost through truncation. The presence of faunal groups in both gullies, with [4004] being especially rich, echoes the bone group in the gully bordering (4077) on its southern side, namely [4033], and seems to strongly indicate they were likewise open features, probably contemporary with [4033] (Fig. 4.25).

Gully [4042]

A further straight regular gully lay between [4004] and [4006] (particularly close to the latter, being just

c. 0.2m to the north). Again cut into natural boulder clay, it extended from the south-west baulk on an easterly alignment for c. 2.4m before terminating in a rounded end (Fig. 4.25). At this point there was an asymmetric oval feature (0.22m by 0.36m) which was possibly a separate feature but which at the time of excavation was thought to be a continuation of the gully, turning to the north immediately prior to ending. The width of [4042] varied from 0.32m to c. 0.24m and it may have been broader at its western end. U-shaped in profile, with regular sides [4042] was cut to a similar depth along its course, including the terminal (Fig. 4.29 no. 56). It ran parallel with gullies [4004] and [4006] and its relationship with them is uncertain as there were no stratigraphic relationships, with [4042] not cutting or cut by other features. It contained a friable greyish brown silt with clay (4018) 7.5YR 5/4, closely similar in character to (4005) which filled the adjacent gully [4006]. Seven very small fragments of pottery were recovered including a sherd of Nene Valley type colour coated ware and a fragment of oxidized red Swanpool pottery with a trace of cream paint. As with the fills of gullies [4004] and [4006] (4018) contained a sizable group of animal bones and fragments given its size, including a sheep/goat tooth and sheep/goat vertebra, cattle mandible and rib. It is possible that the asymmetric terminal represents a post setting, but that said, the depth is no greater than elsewhere along this gully. The function of [4042] would seem from its character and alignment to be similar to that of [4004] and [4006] but whether it was an earlier or later manifestation is unclear.

Gullies [4091] and [4093]

To the north of [4004] were two further gullies. Around 0.3m north of [4004] a short irregular gully [4093] traceable for c. 1.85m was less than 0.1m deep (Fig. 4.25). No finds were associated with its silty fill (4092) and given its slightly meandering form it might represent a natural feature created by water draining from the higher ground to the west. However, its occurrence by a series of other gullies on a similar general alignment that were deliberate cut features suggests it probably belongs with that series.

Another presumed gully was partially exposed along the northern edge of the excavation on its western side. This feature, Gully [4091], ran east-west between Cut [4079] and Gully [4004] (Fig. 4.25). Approximately straight, it measured c. 3m by a minimum of c. 0.36m but continued beyond the trench edge so was broader. It was a shallow feature. At its eastern end it appeared to be cut by [4004]. It had a slightly undulating base but its lowest points were cut to the same level so it was

not necessarily initiated to drain water in a direction. It does not appear to have been a structural slot but perhaps that possibility cannot be ruled out. Its silt fill (4014) included a few fragments of animal bone.

Linear Cut [4079]

Further to the east, a deeper linear cut [4079] continued the line of [4091] but was a separate feature (Fig. 4.25). It was 2.85m long as exposed within Trench D, though it perhaps continued to some degree beyond the western edge of excavation. It was 0.5m in width and at deepest, along its flat mid-base, measured 0.26m in depth (Fig. 4.29 no. 61). It cut the top fills of ditches [4021] and [4075]. The fill of [4079], (4016), was a dark loamy silt (5YR 2.5/1) with some charcoal and rare, but notably for this site, ironstone fragments. (4016) also contained a comparatively sizable pottery group including Dales ware, the rim of a very large storage jar and the rim, neck and shoulder of a large handled jar (cf. Darling and Precious 2014, fig. 108 no.1054), together with animal bone finds, as well as a coin of Claudius II (268-270) from towards the bottom of the context that was evidently residual RF 4005. This was a much more regular and pronounced feature than gully [4091]; its likely relationship to the adjacent Oven [4028]/[4086] is suggested by the fact that both features contained ironstone, otherwise absent from this site. It may have held a wind-break

or other dividing feature screening the oven or was related to accessing the Stoking-Pit [4028]. (There was a slight intersection of a few centimetres at the top of the cuts [4079] and [4028] which Fig. 4.25 does not show).

Flue [4086] and Stoking-Pit [4028]

The northern extension of Trench D exposed the remains of a large oven of Late Roman date (Fig. 4.25). Both the Stoking-Pit [4028] and the Flue [4086] were visible immediately below the ploughsoil. As with Oven [4058]/[4062] this oven had been cut into the soil fills of Ditches [4075] and [4021] and was aligned with this feature. The stoke-pit at the southern end of the oven, [4028], was D-shaped in plan with regular sides (Figs 4.25 and 4.29 no. 60); it measured c. 2m across by 1.1m, and was 0.8m deep. Neither the stoke-pit nor the flue were cut by any subsequent features. Linear cut [4079] on the south side of the stoke-pit [4028] appears to have been contemporary, and open at the same time as the stoke-pit.

The upper and main fill of [4028] was a loamy dark silt (4094). This deposit was characteristically similar to (4016), filling the adjacent cut [4079], and was contiguous with (4016) as the two cuts met along the southern edge of [4028]; these fills probably had shared the same formation origin and in likelihood were one stratigraphic unit. The main lower fill of



Fig. 4.26 The Oven Flue [4086].



Fig. 4.27 The Oven Flue [4086] with its Stoking-Pit [4028] in the background.

[4028] comprised thin layers and lens of ash, silty clay and soot (4026), containing some fuel ash slag and much fired clay/clay soil, these layers being grey (5Y 5/1), yellow-brownish (10YR 5/8) and black (10YR 2/1) respectively. Amongst this main lower fill were several stones (4027) measuring as follows: 150mm x 100 x 85; 200mm x 180 x 90; 180mm x 110 x 40; 95mm x 90 x 65; 195mm x 125 x 85; 240mm x 135 x 115; 165mm x 120 x 80). It is likely that both these stones and the silty clay were from the structure of the flue or superstructure that had collapsed or become loose. The ash and soot were evidently debris associated with the firing of the flue [4086] and/or its 'raking-out'. Context (4026) contained coins dating to the late fourth century (c AD 378-402; c AD 388-402; RF 4007; RF 4008). A pig jaw and a cattle tooth were recovered associated with (4027). The bulk sample for environmental analysis from this deposit (4026) yielded several tiny fish bones and much carbonized material. At the base of [4028] was a thin clay spread (4040), probably deposited to form a surface, over a lowest fill of mixed ashy silt and soot (4044) amounting to 3 buckets; this deposit yielded a coin of the House of Constantine dated to AD

347-348, RF 4009. Another late coin RF 4003, an issue of Valentinian II dated c AD 388-392, had been recovered from the ploughsoil above (4016) and this oven.

The flue [4086] measured c. 3.6m in length in a cut of c. 1.15-1.30m in width, extant to a depth of c. 0.85m. The sides of the cut were nearly sheer and the western side had been lined with carefully laid courses of large stones. The eastern side of the flue channel may have been lined with stones at least at some stage but no stones were found *in situ* on this side but rather scorching directly on the side of the flue cut indicated direct exposure to heat. On the western side the stones of the lining (4095) had largely remained in position to the height of the extant feature and for its entire length. On the eastern side, if stones had been added at some stage then these had collapsed or been removed/demolished in antiquity and may have formed part of the tumble/jumble of stones filling the flue channel (4096). On the standing western side the stones were up to c. 0.3m in length and comprised blocks of the tabular grey flint together with large erratic igneous cobbles, both types being available in the area of the site coming from the Burnham Chalk and glacial till respectively. The tabular flint naturally breaks into block forms convenient for such construction whilst the erratics had clearly been selected for their shape, size and robust quality. The flint had been employed mainly at the northern end of the flue and the erratics at the stoke-hole end; this is unlikely to simply reflect what was to hand but rather would seem a functional choice since the erratics will have been more resistant to the high temperatures likely reached at this point along the flue. The stones lying within the centre of the flue channel were exposed but not excavated (Figs. 4.26 and 4.27) and were of a different nature, being larger and mainly of different stone types. Apart from one large basalt erratic (c. 0.32m) these stones were Claxby Ironstone and Tealby Limestone with the former including long flatter stones (up to 0.6m in length) than with other stone types and present in the mid-flue while the Limestone was of smaller size and more concentrated at the stoke-hole end of the flue; presumably the comparatively long flatter ironstone items had been employed to span the top of the flue at this mid-point where the fire would have been. The northern end of the flue was fully excavated. The upper and main fills through the flue, (4061) over (4071), were essentially dark brown silty loams (10YR 3/3) and contained frequent charcoal flecks and some ironstone fragments along with flint and chalk. Evidently these were

mixed deposits including debris from the flue and its use. The lowest fill contained much soot, ash and charcoal along with fired clay fragments, both oxidized and unoxidised. Context (4061) contained some animal bone including cattle shoulder blade(s) and a caprine jaw bone, while (4071) contained a pierced cattle vertebra. A bulk sample for environmental analysis was collected from the sooty, ash-rich deposit (4076) which lay below (4071) at the distal end of the flue, presumably representing use of the flue; this was found to contain much fuel ash slag together with fire cracked flint (of tabular flint, presumably from the structure of the flue) and charcoal, plus two small fragments of coal. The sample also contained fragments of structural clay with waxy impressions (Fig. 11.15). Several fish bones were also present in this sample. Unfortunately there was no opportunity to clean this feature to a good standard for photography before the field needed to be returned to agriculture.

A short linear cut to the west of the terminal of [4086] yielded similar material to the fill of this flue. This feature [4065] measured 0.46m by 0.16m and survived to a depth of c. 0.08m (Fig. 4.25). Its silty fill (4066) included charcoal and fired clay with wood impressions. This may represent a feature contemporary, and indeed associated, with the oven, possibly related to its superstructure.

Discussion

This was the longest flue of the ovens excavated at Hatcliffe Top and the only one to have a stone lining. As such it shows a greater investment of preparation, time and effort and that, together with its scale, may be an indicator of its importance, or rather the importance of the drying purpose it was presumably created for. Its scale is similar to that of the other excavated oven from Trench D which had likewise been cut into the filled ditches of Phase 1. It was the latest feature in the northern part of Trench D. It is likely this oven was later than [4058]/[4062]; it could have been contemporary if the clay floor (4077) and the build-up of sooty deposits over that floor relate to another oven close-by but outside Trench D (bearing in mind that the geophysical survey detected anomalies that may indicate such features in the area by Trench D, though these of course are unproven and even if present, their date is unknown). However, on the evidence from within Trench D a scenario of the floor (4077) and the sooty layers above it relating to the use of [4028]/[4086] is feasible, with the sooty layers representing raking out debris from the firings in this flue. Whilst the coins recovered from the stoke-pit [4028] cannot be said

to securely date its use they were within its lower and main fill and indicate the probability that this feature dates from the later fourth century and was out of use and filling in the final years of the fourth century, or possibly the early fifth century, with the implication that the activity it represents remained important to the end of the Roman era at the site. The coin of Valentinian II from the ploughsoil above this feature RF 4003 may have derived from the fill of this feature or deposits associated with it.

Placing the oven in the filled ditches was presumably undertaken for ease of excavating relatively soft and looser material rather than creating a fresh intrusion into chalk bedrock, for what was a quite sizable feature. The placement of the oven within the ditch cuts, as with the insertion of [4058]/[4062] to the south-east means we can infer that there was some visible indicator of the filled ditches at this location at that time. The phenomenon of placing ovens into backfilled ditches in the Roman era is far from unique to Hatcliffe Top. The practical reason for inserting an oven flue and stoking-pit into soft soils is readily comprehensible, though it should be noted that some would see this as a symbolic revisiting of a boundary.

The function of the linear cut [4079] by [4028] as potentially representing a point of access to the stoke-pit or having held a screen may be considered. The gullies [4004] and [4006] seem likely to be broadly contemporary with this oven (and it can be observed that the alignment of [4028]/[4086] is perpendicular to their alignment, and that they terminate at a point parallel to the eastern side of this oven). Taking these gullies (and the shorter examples on the same alignment), the linear cut [4079] and its associated cut [4091] together with the oven [4028]/[4086] as belonging to the same Late Roman phase means that this northern part of Trench D saw no detectable use activity between the filling of ditches [4075] and [4021] (Phase 1) and this phase (3).

The flue cut [4086] is relatively broad and may have accommodated stone lining on both sides. Scorching on the eastern side (composed of *in situ* silty-clay fills of ditch [4075]) where no lining was extant would seem to indicate that this side was directly exposed to heat. Hence it may never have been lined in the manner of the western side. The lining on the western side was not removed during the excavation as it was felt it should be left intact, so it remains uncertain whether the edge of the cut here was scorched in the same manner of the eastern side. The stone lining may have been added to narrow the flue. The presence of Claxby Ironstone and Tealby Limestone in this feature (together with some Claxby Ironstone in [4079]) represent the only instances of these stones at the site as no other examples

were found in the excavated trenches nor observed in the ploughsoil. These rock types outcrop on the western escarpment of the Wolds some 12km away from Hatcliffe Top. They were used as building stones in the Roman period, as seen at other sites examined through excavation as part of the Central Wolds Research Project, at the roadside settlement at Nettleton/Rothwell (Willis 2013) and at Brookenby villa (Willis forthcoming b), and probably also at Otby Top where structural stone occurs in ploughsoil together with Roman material culture (Willis 2013, 359-62). Given there are no precedents for the occurrence of these stone types at Hatcliffe Top it seems probable that they were obtained from another Roman site, that had stone built structures but which had passed out of use by the Late Roman period, somewhere in the area of Hatcliffe. In the case of this oven they were clearly acquired/selected for the purpose of capping the width of the flue as other more local stone types simply will not have provided the length of stone required.

Soot and Ash Rich Layers (4049), (4038), (4017), (4024) and (4002)/(4037)

A series of layers and lens which included a high proportion of ash and soot had built up over the clay surface (4077) across its extent and, not evidently, beyond it, in the later Roman period. These deposits may have been more extensive in the past but whether that was so or not the concave nature of the upper surface of (4077), dipping by c. 0.35m, meant that these layers had been preserved as they lay within this shallow saucer depression. The lowest of these layers, directly over (4077), though not covering it entirely, was a generally black sooty deposit (4049) which was up to 0.1m in thickness in some places (Fig. 4. 24 no. 55). On its south-western side it included lenses of strong brown clay-silt (7.5YR 5/6) with some soot staining. An isolated pocket of black soot c. 0.33m in length also occurred immediately over (4077) to the north-west, being (4102) and continued beyond the western limit of excavation, as did (4049); this deposit may have been contemporary with (4049). No pottery was present in these two deposits, though (4049) yielded ten items of bone including a shattered scapula.

Above (4049) was a comparatively thick and more extensive deposit (4024)/(4038). This layer was up to 0.21m in thickness, comprising mainly yellowish-brown silt with clay and soot, with some lenses of dark soot and stronger clay which in places was crumbly (10YR 3/2, 10YR 4/4, 10YR 5/4, 7.5YR 4/2). This extended over much of the extent of (4077) but did not fully cover the surface. As with (4049) context (4024)/(4038) extended beyond the western limit of

excavation (Fig. 4.25). This layer produced a group of Roman pottery sherds that were in an advanced state of fragmentation and very likely secondary in this deposit, but included a rim from a lid-seated jar; also present were an iron nail, burnt clay, and a small group of animal bones.

A further comparatively thick black layer (0.15m) overlay (4024)/(4038), again with a very high soot and ash content with some charcoal in a silty matrix. This was a soft loose layer with few inclusions though with some red and reddish brown heated clay flecks and fragments present. Given its extent and thickness this unit was allocated the numbers (4002)/(4017)/(4037) to discriminate horizontally and vertically, with (4017) being the physically lower part of (4002). This layer spread across (4077) through the middle area of the trench above the location of the oven [4058]/[4062] where it was distinguished as (4002) and continued to the west, narrowing before continuing beyond the western limit of excavation; here it was distinguished as (4037). This sooty layer (4002)/(4037) lay immediately below the ploughsoil (4000) and it is highly likely this layer had been truncated by routine ploughing. Although at Trench D there was no sign of medieval rigg and furrow intrusion into this layer, or elsewhere at D, it is probable that such ploughing had occurred but traces of that activity at this point had been erased by modern ploughing. As this layer was encountered below the ploughsoil at the start of the excavation it was not immediately clear what it represented, therefore, as an additional control it was excavated in square metres on a gridded basis in order to locate all finds and samples. As it happened the horizon proved to be a largely homogenous layer with low levels of finds, and these were evidently secondary in this context.

From context (4002) were recovered a Late Roman buckle (RF 4004) and a lead object, perhaps collected scrap (L110, RF 4001), together with two coins. The latter were late third century coins and therefore likely to be residual, being 'Tetricus I' and Allectus coins (respectively RF 4002 and RF 4000). Pottery from this context included many highly fragmented and chronologically undiagnostic sherds, though (4002) yielded the rim and upper wall of a straight-sided dish and the rim from a lid-seated jar together with Dales ware, while a further Dales ware rim came from (4017), and from (4037) came Swanpool items including a sherd from a cream-slipped mortarium. From (4002) 28 animal bones together with 48 fragments were recovered, while the equivalent figures for (4037) were some ten animal bones and 15 fragments. Contexts (4017) and (2014) yielded 12 bones and 11 fragments.

Bulk samples for environmental analysis were collected from contexts (4002), (4017) and (4037). These three samples contained various evidence types; all three had fuel ash slag and fired clay/clay soil present. The bulk sample from (4002) yielded bones from small rodents and a very small fragment of coal, while burnt bone fragments were present in the samples from (4017) and (4037). (4017) had fish bones present and bones from small rodents.

Discussion

The origin of these layers as the detritus from sustained heating activity cannot to be doubted. Overall the number of finds from (4002)/(4017)/(4037) and (4049) and (4102) was moderate in number and limited in range, reflecting the nature of the wider assemblage from Trench D, yet also not surprising given the processing function of the area at this time and the essence of the deposits as accumulated spent fuel. The deposits seem likely to relate to the oven [4028]/[4086] and/or other similar features close-by, of which there is some indication from the magnetometry (although of course even if present they may be of a different date). The soot, ash and charcoal would therefore represent raking-

out and dumping of spent fuel from the flue/s, hence the presence of coal fragments and twig charcoal amongst these layers. The low quantities of pottery and animal bone recovered are consistent with a general area of processing activities away from, but perhaps fairly close-by to contemporary occupation. The more silty-clay layer (4024)/(4038) may have been laid down to seal the sooty ash material of (4049) and (4102) which may have been prone to blow around and overall to decrease the levels of 'dirt' that soot is notorious for producing, or it may relate to hillwash following a storm; most likely the former. Above this consolidation layer there occurred a further build-up of soot and ash rich material indicating continued oven-related processing and the management of its waste. The size of the Oven [4028]/[4086] and of, perhaps, others in the vicinity could readily account for the amount of burnt waste material being generated and removed to this area bracketed between gullies [4006] and [4033]. This material may perhaps have been collected for a specific use, such as for spreading on arable land as a fertilizer, mixed maybe with dung or compost for dilution. Another possibility should perhaps be considered, namely that this burnt debris relates to the heating of stones for use in the process of malting and brewing.

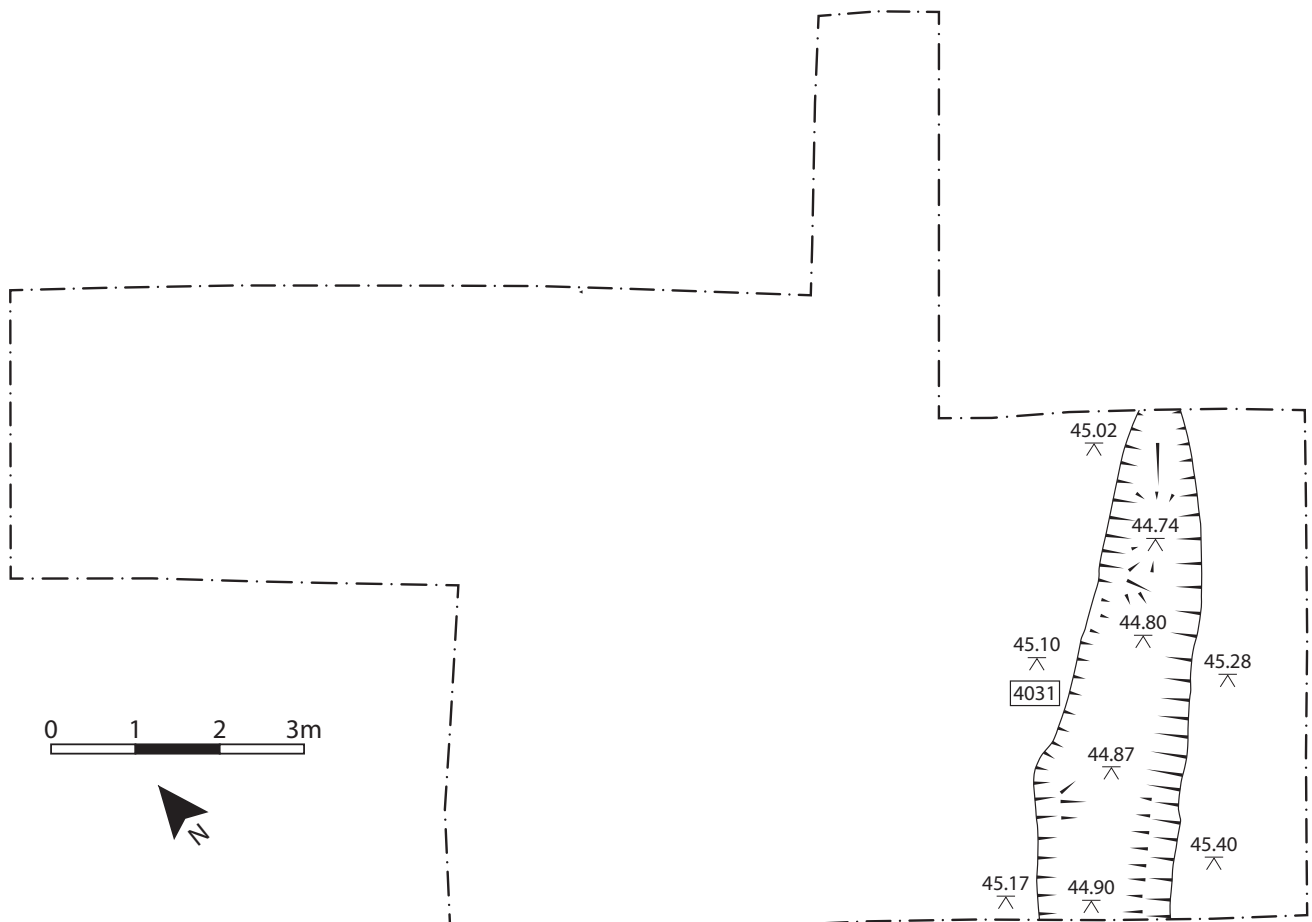


Fig. 4.28 Plan of Trench D, Phase 4.

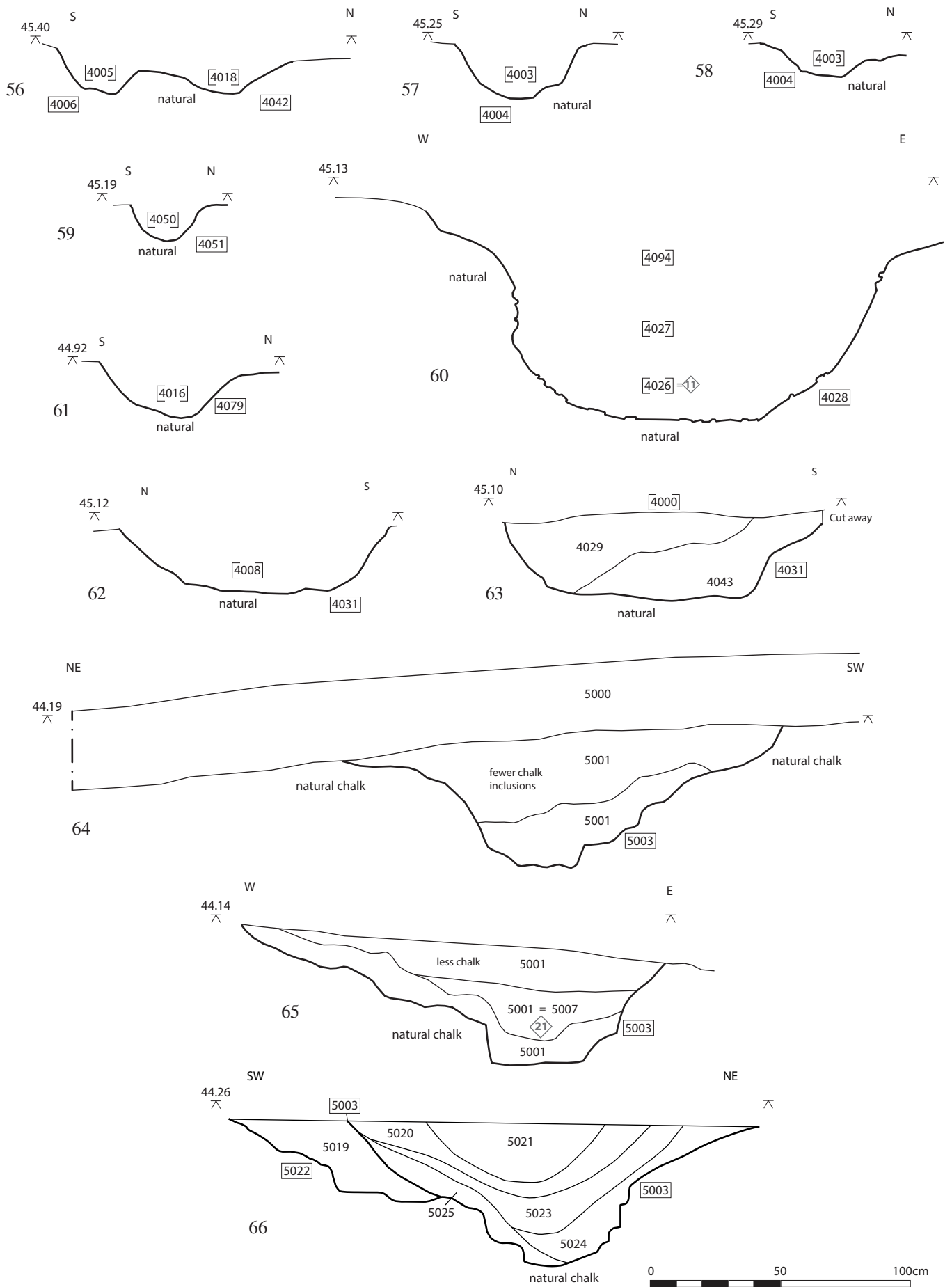


Fig 4.29 Section drawings and profiles, Trenches D and E.

Phase 4

Ditch [4031]

A broad straight ditch [4031] was located at the southern end of the trench running parallel with the southern baulk (Fig. 4.28). Traversing the width of the trench for 6m it cut through the natural glacial till layer (4001) to natural chalk. It cut the ditches [4075] and [4021]. This was a significant discovery for [4031] and the ditch [4075] and its recut [4021] had, prior to excavation, given the impression on the geophysical survey of forming two sides of a square enclosure; evidently they were of different phases and did not form part of an enclosure.

Ditch [4031] was broader and deeper at its south-western side within D. At the south-west baulk it was c. 1.8m across (as encountered immediately below the ploughsoil) but from a mid-point in the trench it narrowed consistently so that at the north-east baulk it was just c. 0.44m in width. It appeared to be terminating with the presumed actual end-point lying beyond the north-east limit of excavation (rather than this narrowing being explained by greater truncation on this eastern side of the trench). A termination at this point would be consistent with the results of the geophysical survey (Fig. 3.12). Likewise from a depth of around 0.4m at the south-west end of the trench it shallowed to just 0.16m by the opposite baulk. Overall it had a broad flat u-shaped profile and was of regular form (Fig. 4.29 no. 63). It had been cut to essentially the same depth (OD) along its exposed extent.

In addition to [4075] and [4021] Ditch [4031] cut the floor layer (4077) and the build-up of sooty material over that surface (4037). It also cut the flue [4058], clipping its southern end. It almost certainly cut the very shallow gully or slot [4035] (which was not observed to continue across the top of [4031] and its fills). There was some variation in the fill contexts within [4031] over the course of its length, in part no doubt a reflection of its length but also due to the fact that being a late feature it received, at some points, material eroding from the heterogeneous adjacent deposits. Lower fills were present on both sides of its lower edge at its south-western end within D, (4055) and (4085), being characteristically similar deposits of mixed silty clay and loam with chalk fragments, 10YR 4/2 dark greyish brown, and presumably representing early weathering (Fig. 4.24 no. 55). At a mid-point along the exposed length of [4031] the lower fill was a mixed reddish brown silty clay, 7.5YR 5/4 (4043). A pocket of lower fill around 1.5-2m north-east from the south-west baulk on the north side of [4031] was a gritty clay

(4047) resembling (4077); this spread evidently represented eroded or slumping material from the adjacent earlier floor/surface deposit (4077) at this point. There is some probability this feature was recut or partially emptied as section drawings show angled fills (Figs. 4.24 no. 55 and 4.29 no. 63), although there is overall a uniform profile and base to the feature that expresses no sign of re-cutting, while the angle of coarse inclusions and other observations showed no sign of re-cutting; water movement may explain the profile of these fills.

The upper fill, which was the main fill, was essentially a single unit with some variations in composition along its extent. This was allocated the following numbers: (4008) and (4011) towards the north-east end, (4029) in the middle of the trench, and (4036) at the south-west end. It declined in thickness as the feature narrowed and shallowed to its north-east, from a maximum depth of 0.43m at the south-west baulk. In general this upper fill was a comparatively dark silt with some loamy content in which there was an evident soot and cinder slag presence, derived from the earlier adjacent layer (4037) through which [4031] was cut at its south-west end; this contributed to a silvery black appearance to (4036) particularly on its northern side at this end, whilst it was broadly a dark greyish brown (10YR 4/2 to 4/3). A few fragments of amorphous orange-red fired clay were present in (4036), again presumably coming from the earlier adjacent burning activities. Context (4029) was grey-brown with less evident soot, 7.5YR 4/2. A coin was recovered from (4036), being an issue of Valens c. AD 364-378, RF 4010, while a further Roman coin, RF 4006, came from (4029) being a FEL TEMP REPARATIO (falling horseman) copy of c. AD 355-365.

Pottery finds from [4031] included a modest sized group from context (4036) comprising mainly Roman grey wares, a cream-slipped Swanpool item, calcite-gritted ware, and shreds from an oxidized vessel (probably a jar) with large rounded quartz tempering, evidently from a Late Roman form. A distorted and vitrified jar rim was recovered from (4029); was this perhaps a residual item, having been exposed to high temperatures associated with the fires in the ovens of phases 2 or 3 close by? Context (4029) also produced a rim from a likely Drag. 38 copy with cream slip trailing, probably a Swanpool item. Only a very small quantity of animal bone was recovered from the fills of this feature, despite its scale, with no such finds present in the lower fill deposits. The pottery dates to the final phase of Roman pottery production in Lincolnshire.



Fig. 4.30 The separate spoil heaps for individual contexts by Trench D in 2009.

Discussion

Feature [4031] was a regular linear ditch on the same co-axial alignment of many of the major linear features examined at Hatcliffe Top. Excavation showed that it was not part of a putative square enclosure suggested by the results of the geophysical survey but rather was of a later phase than ditches [4075] and [4021], which it cut, prior to seeming to terminate. The depth of the ditch relative to OD was essentially level across the exposed length of 6m which might suggest that it was not for drainage, directing water away from activity areas, although the chalk base will have allowed much water to permeate away. The ditch appears to narrow and shallow to the north-east but this may be a function of erosion as the ground slopes in that direction today and there may have been a degree of truncation at the north-eastern end through ploughing off the slope.

This ditch is later than the clay floor (4077), the thick soot rich layer above that floor, and the oven [4058] and is evidently the latest feature within Trench

D. The gully or slot [4033] which runs parallel with [4031] on its south-eastern side could be contemporary but this seems improbable (see above). The indications are that this feature was instituted in the Roman period, as it follows the grain of the land organization of that period, while equally it contained, bar two post-Roman sherds from its upper fill, only Roman finds. It must therefore date to the very end of the Roman period. It is likely that Ditch [4031] was maintained until the end of the Roman occupation, conceivably into the fifth century, and then, with the site no longer in use, already filling in the last years of the Roman era, filled completely in the immediate post-Roman era. The presence of the coin of AD 364-378 indicates the feature was filling after the mid-fourth century and indeed the coin may be residual in a filling of the ditch later than its time of issue and initial circulation. A post-abandonment date for the final filling of the feature might be implied by the very low quantity of animal bone present, together with few pottery finds by deposit volume (see Table 11.8 for

volumetric data), suggesting a lack of rubbish disposal or 'background' noise of current material culture when the ditch filled. This suggests a sustained continuity in the spatial arrangement of the site as the area of Trench D evidently lay nearby, but away from, the main locus of occupation through the Roman period, with Phase 4 no exception.

4.6 Trench E

Introduction

Trench E was opened in August 2010 and was rectangular in plan measuring 8m by 4.5m amounting to an open area of 36m² (Fig. 4.31). The area was under rough grass, being an uncultivated corner of the field adjacent to the hedge bordering the road to Hatcliffe village (just c. 1.65m to the north of the northern limit of excavation) and the former chalk quarry; it could not be readily accessed by large modern machinery. Nonetheless plough marks were observed in the top of the natural and archaeological deposits within the confines of the trench following topsoil removal and so perhaps cultivation had continued until quite recent times. The topsoil over the trench (5000) was significantly deeper than the ploughsoil of the adjacent field at

0.30 to 0.35m through the southern and middle parts of the trench, but thickening to 0.45-0.50m towards the hedge, where this extra depth was explained by the presence of an old headland adjacent to the hedgeline. The topsoil was removed using hand tools, with again metal-detecting and close scrutiny of the loose spoil generated, in order to maximize the recovery of finds. The only coin recovered at Trench E was found by eye during this process, coming from topsoil (over natural chalk) towards the south-west corner of the trench. This coin RF 5001 was a Constantius II Caesar GLORIA EXERCITVS issue of c. AD 330-335. A stem fragment from a clay pipe was also recovered from (5000).

Since this area had stood as uncultivated land for some years the soil was compact and it was anticipated that there might be better preservation given the absence of modern ploughing. As with Trench D to the south no evidence of rig and furrow cultivation was encountered, either because the area opened lay between two furrows or the evidence had been eroded. Instead, cleaning at the base of the topsoil showed natural chalk and a pronounced linear spread of soil through the centre of the long axis of the trench (south-east to north-west). This proved to be a boundary ditch. The ditch followed a 'dog-leg' turn and was later recut. A shallow gully to the north-east was most likely a contemporary feature.

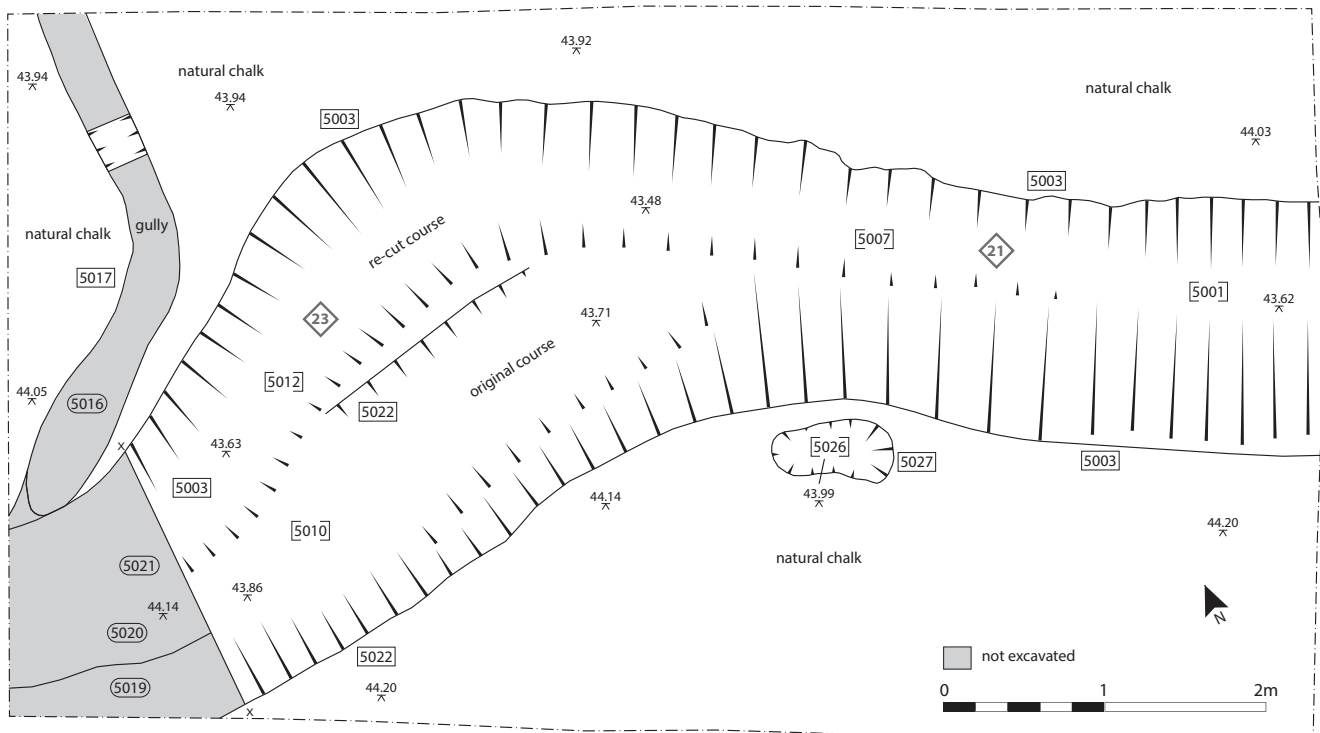


Fig. 4.31 Plan of Trench E.

Phase 1**Phase 1A: Ditch [5022]; Phase 1B: Recut [5003]**

Ditch [5022] was the earliest feature in the sequence at E (Fig. 4.31). It had evidently extended the length of the trench, running from south-east to north-west but was only discernible from c. 3.4m north of the southern baulk of the trench; it had been recut on the same alignment south of this point which had obliterated direct indications of its presence. Presuming it had followed the same course as the recut, then it had originally extended for a distance of c. 9m within the trench, and continued beyond to the south-east and north-west. It had been cut into the natural chalk bedrock. Cut [5022] was approximately regular in form and of u-shaped profile. A full width and profile had not survived; it was best preserved at the point where it turned to the north-west by c. 40°, although given this was a 'corner' it was not necessarily representative of the feature in general. It was better preserved here as the recut had followed a course slightly further to the north-east before itself turning (Fig. 4.31). Here it was flat bottomed with a width of 0.4m metres at its base, with a maximum surviving width of 1.44m. The lower part of its eastern edge was extant to a maximum of c. 80mm at this point. Its western edge survived fully from the mid-point of the trench northwards and had a regular, comparatively gentle, sloping cut profile through its upper section where it cut the natural chalk brash before a step down as it cut the solid bedrock (Fig. 4.29 no. 66). Around the point of the turn the ditch was 0.40m deep, while a little further to the north it was extant to a depth of 0.35m. Given this feature lay near to the edge of a steeper downward natural slope in the field topography this feature is likely to have suffered truncation and erosion off this 'lip', so these figures only provide the current surviving depth.

The lower and main fill of [5022] was a yellowish brown silt with clay and chalk fragments (5018). The lower part of this fill was slightly lighter than the main fill above, 10YR 5/4, probably due to its immediate proximity to the chalk edge and as it contained frequent fragments of angular chalk, some larger than those within the fill above. This lower part presumably included some erosion of edge material though weathering. The upper and main part of (5018) had less frequent larger chalk fragments. The upper fill (5019) was a similar matrix, again yellowish brown, 10YR 4/4 to 4/5, but contained common fine and pea-size chalk, rounded and sub-rounded, up to 8mm, in contrast to (5018), while angular chalk fragments up to 80mm were

present but sparse. A small group of animal bone fragments were collected from (5018). Only one sherd of pottery (Roman grey ware) was present amongst the fills of [5022], from (5018).

After [5022] had filled it was recut (Phase 1B) to a somewhat greater depth on broadly the same alignment. The re-cut, [5003], extended through the trench for 9m (Fig. 4.31). At the southern end of the trench this ditch was c. 1.55m in width and survived to a depth of c. 0.5m. It had gently sloping sides and a flat bottom where it followed a bedding plain in the natural chalk (Figs. 4.29 nos. 64 and 65). Towards the northern end of Trench E the width was the same and the extant depth c. 0.55m (Fig. 4.29 no. 66). It turned at the same point that its predecessor had done, though as mentioned this was slightly to the east at this point. Here the profile was again u-shaped with a flat base (Fig. 4.31). [5003] evidently obliterated [5022] on the southern side of the trench or there was a complete emptying of [5022] as no trace was identified; complete removal might be favoured given [5003] was seemingly a deeper ditch by 100-150mm. The difference in the course of [5003] at the point of the turn of the ditch recut is a familiar phenomenon often leading to the better preservation of the earlier cuts at such changes of angle. North-west of this point the course of [5003] again largely encroached on that of its predecessor.

The filling of [5003] was characteristically similar to that of its predecessor. Through the southern and middle sections of the feature, as exposed within the trench, the fill matrix was a yellowish brown silt with clay throughout, mainly 10YR 4/4 to 5/4, but 10YR 4/6 in some cases by the edge of the feature next to the cut natural chalk. It differed only vertically, in the degree to which coarse chalk fragments were present, with abundant angular chalk in its lower part (5012)/(5014)/(5015), and common chalk in the upper level of fill (5006)/(5009)/(5011)/(5013); in with the chalk at both levels were occasional angular flint fragments derived from the tabular flint. The chalk fragments measured up to 95mm in longest dimension. Contexts (5001) and (5007) represent excavation of the ditch fill at southern and middle sections of the ditch where it was excavated as a single deposit. Context (5001) produced 16 sherds of Roman grey ware. Non-joining sherds from a large samian dish in Lezoux fabric were found lying at the base of the cut of [5003] by the turn of the ditch to the north-west, (5014), and were evidently part of its earliest filling. By the turn of [5003] the upper fill, distinguished as (5011), yielded a small assemblage of finds including pottery, tile, an iron nail, animal bone, burnt clay, three small

lead objects (best described as irregular droplets or off-cuts, L102, L103, L104, see Table 7.5) and a complete garden snail shell (*Cornu aspersum*). The animal bone from (5011) comprised 57 items but these were mainly small and very small fragments; pottery from this context included nine sherds from a fine grey ware vessel, other sherds in a different fine grey ware, possible from a flagon, and typologically late Rusticated ware, probably of Antonine date. The sectioning of the ditch toward the north end of the trench was undertaken in damper conditions; more differences were visible at this point indicating variation in the filling sequence of the feature. Nonetheless, these constituted variations on the same basic filling of silt with clay and differing frequencies and character to chalk inclusions: from bottom to top, fills (5025), (5024), (5023), (5020) and (5021) (Fig. 4.29 no. 66). The nuances to the filling seem not a function of greater discernment due to recording conditions but rather may reflect the change of course in the ditch. The modest number of small sherds of middle Roman pottery, including typologically late Rusticated ware and a sherd likely to be from a flagon, came from the final substantive filling (5011)/(5021), broadly consistent with the date of the samian pottery found 2m to the south from the lowest filling. In general animal bone was present in low but persistent frequency through the fill(s) of [5003] reflecting the pattern of presence of animal bone in the fill of the preceding ditch. Bulk environmental samples were collected from ditch fill contexts (5007) and (5012).

Curvilinear Gully [5017]

At the north end of the trench a shallow gully occurred cut into natural chalk [5017] (Fig. 4.31). This extended for 3.5m within Trench E from the eastern edge of Ditch [5003] on a broadly east-west alignment before turning to the north-east. It continued beyond the eastern baulk. It measured c. 0.3-0.4m across. A short section of fill was excavated towards the eastern side of the trench where [5017] proved to be c. 0.09m deep below the current surface of the chalk. It was filled by a mixed and mottled brown silt with clay (5016) with some pockets of loamy silt and others of stronger clay, 10YR 4/3, 4/4 to 5/4 with lighter mottles, with frequent angular and sub-rounded pea size chalk present. The nature of the fill suggests the feature was backfilled soon after being opened, and probably with material dug out during its initial cutting, when the glacial till/old soil was still extant in this area. No finds were recovered from this deposit.

Natural features

The only other features present at Trench E were two small scoops both of which were fully excavated. One occurred in the east-central area of the trench and overlay the edge of Ditch [5003] being cut into the top of the ditch fill (5019) and natural chalk. This scoop [5004] was sub-circular in plan with a flattish base and somewhat irregular sides. It measured c. 0.63m by 0.46m and was c. 0.13m in depth (not shown on plan). Its fill (5002) comprised a loamy clay with frequent chalk fragments; the only finds were one fragment of animal bone and part of the shell of a garden snail. This was probably a natural feature such as the position of a root bowl of a shrub. A second scoop [5027] was more regular in plan and occurred just west of [5003] in the central area of the trench cutting natural chalk (Fig. 4.31). This cut was kidney shaped in plan c. 0.75m by 0.35m and c. 0.16m in depth; it contained a natural looking fill and yielded no finds. This may have been a periglacial disturbance of the natural chalk.

Table 4.7 The Sequence at Trench E with approximate dates

Phase	Context/Feature/ Feature Group	Approximate Date
Phase 1A	Ditch [5022]	Mid-third century
Phase 1B	Recut Ditch [5003]	Late third to fourth century
Phase 1	Gully [5017]	Late Roman

Discussion

Ditches [5022] and [5003] lay in a part of the field where preservation was speculated to be potentially better than in the presently cultivated area. Trench E lay just beyond the geophysical survey and fieldwalked zone and so what might be encountered via excavation was uncertain. The identification of these ditches assists with establishing the morphology and date of the site to a significant degree. The fact that cut [5003] closely mirrors the alignment, turn, scale and profile of [5022] firmly indicates that they were connected, created for the same enduring purpose. The original ditch and recut follow the line of the natural topography at this point, being aligned in the southern part of the trench with the edge of the higher ground before it slopes markedly to the east. This echoes the alignment of the Phase 1A and 1B ditches at Trench D, though these are different ditches. The turn through 40 degrees to the north-west may be explained by the ditch following close

to the edge of the higher ground, as a little further to the north, beyond the modern road, the high ground falls away dramatically to the Waithe valley. The course of the ditch then anticipates this fall-off and essentially follows the contour. Hence the ditch and recut demarcate the higher land prior to marked slopes to the east and north. Together with ditches [4075]

and [4021] in Trench D they presumably represent an enclosure boundary for activity and perhaps settlement in the western side of Corner Field. The consistent presence of cultural debris within the ditch fills is an indicator of the proximity of concerted human use hereabouts in the mid-late Roman period, though noting an absence of features recorded through the



Fig. 4.32 Excavation begins at Trench E in 2010.



Fig. 4.33 Trench E in the course of excavation with the recut ditch fully excavated and with a section of the fill of the earlier ditch still *in situ* below the scale.

eastern side of the nearby Trench B. The ditches are of modest scale; they have doubtless been significantly eroded, being vulnerable as they are by a slope where deposits might be expected to be more readily denuded naturally, and here, this having been potentially exacerbated by medieval and subsequent ploughing. Indeed the absence of any natural clay over the chalk seems testimony to this. Bearing that in mind these ditches are likely to have been of larger scale but have been truncated. Whether there was an internal bank created from the up-cast, on the western side, is not known but a proportion of the chalk in the fills of [5022] and [5003] is angular and 'fresh' and might be from an adjacent bank formed of ditch up-cast. Some of that chalk in the fills will likely to be from frost action on bare chalk edges. There may have been fencing or hedging associated with the ditch.

The appearance of fill (5018) in its variations, filling the Phase 1A Ditch [5022], suggests an accumulation, perhaps through natural processes. This was potentially via adjacent deposits, representing ditch up-cast and/or natural soil eroding into the ditch. As this took place some debris from human activity in the form of animal bone was incorporated in the fill (5018). The soil fill, even in the upper fill (5019) lacked much organic debris or charcoal flecks, though the animal bone present suggests some proximity to settlement. The pattern is largely repeated in the fills of the recut ditch of Phase 1B and the only difference was the amount and coarseness of the chalk fragments present, as the soil matrix and nature of the finds was consistent through the filling, indicating that the nature of the filling process was not altering much during its course. Numbers were allocated to the lower fill largely to differentiate finds and not because they seemed to be markedly different units. Although the lower filling of [5003] was composed in high proportion of chalk fragments this may be the outcome of weathering (especially periodic frost-shattering) of the sides more than the feature having been deliberately back-filled. This recut was evidently still filling in the Late Roman period and pottery types of earlier date present are likely residual.

There was no firm dating evidence recovered from Ditch [5022] and there can be no certainty as to when this ditch was instituted. The implicit association of [5022] with [5003] suggests that it was created and in use in the Roman period, possibly as early as the second century but probably the third. Recut [5003] produced a small group of Roman pottery items, some dating to the mid-Roman period, with the sherds from the Drag. 18/31R dish found at the base of the cut indicating the ditch began

filling at some time after c. AD 120; taken with the occurrence of late style Rusticated ware and flagon this may suggest activity in the second to early third century nearby. However, the upper filling looks to have occurred through the later Roman period so the ditch was probably maintained and in use at that time. There is a firm probability that Ditch [5022] and recut [5003] represent the same organizational schemes seen in the ditch cutting during Phases 1A and 1B at Trench D, likewise potentially dating from the third century or even the later second century, and equally remaining extant into the fourth century. These ditches are however different entities as their alignments and the geophysical survey indicate they belong to different morphological units. In sum, they show a substantive boundary was established in the mid-Roman period and sufficiently important to be re-instituted following silting. The correspondence between the evidence from Trenches D and E (some 16m apart) confirms the scale of the land organization, as suggested by the geophysical survey.

The curvilinear gully [5017] would seem likely to belong with Phase 1. It did not intrude upon the ditches [5022] and [5003] and was coterminous with their edge. Overall the feature seems to respect the course of the ditches, running parallel on its western side before turning, opposite the point where the ditches turn. This could be the base of a slot for a fence (not a hedge given the narrow regularity of the feature and the disturbed-natural looking fill). Such a fence would have extended from the ditches to head northwards towards the natural slope off the higher ground. It is possible, though perhaps less likely, that this smaller feature pre-dated the ditches or was contemporary with them but of primary importance, and that they turned through 40° to respect it.

4.7 Trench F

Location, excavation and features

Trench F was opened in August 2010. As with Trench E it was located in an area of rough grassland, being (at that time) an uncultivated margin of the field on the east side of the former chalk quarry. The trench lay around 6.8m east of the quarry entrance and approximately 24m south of the hedge on the northern side of Corner Field. It was rectangular in plan measuring 5m by 1m and aligned north-west to south-east (Fig. 4.34). This location was a narrow unploughed margin, on a marked slope, and just at the point of not being feasibly accessible to large modern farm machinery, and so offered the prospect

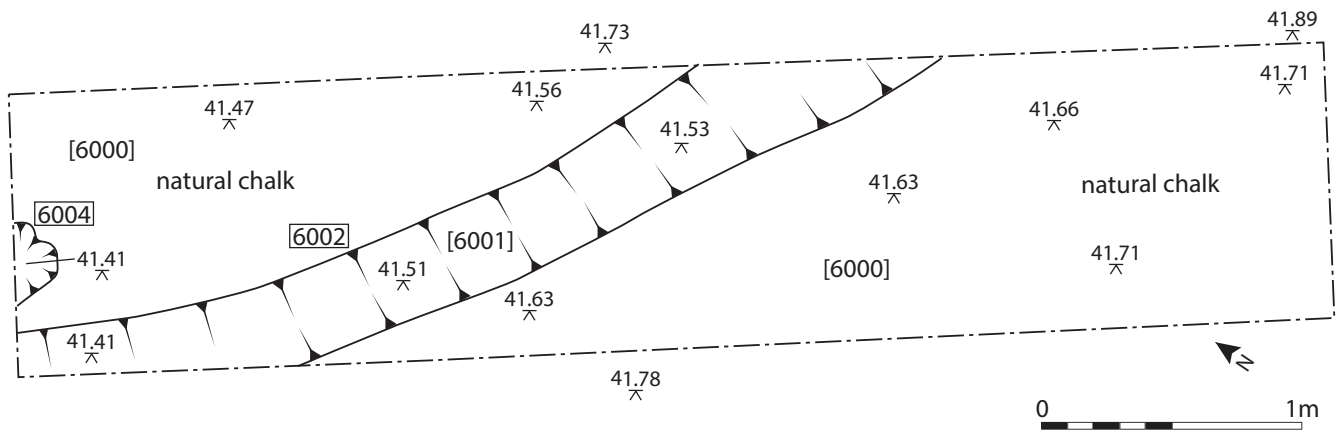


Fig. 4.34 Plan of Trench F.

of potentially good preservation of archaeological deposits, if the slope was not too eroded and post-war ploughing not too incisive. That said, the modern ploughing was up to the south-east terminus of this trench, with the standing crop at the time marking this end of the trench.

The topsoil over the trench comprised a greyish brown loam soil (6000) consistent with the general ploughsoil of Corner Field, but a somewhat lighter greyish brown, and found, upon excavation, to contain near abundant angular chalk fragments disturbed from the sub-soil. Its lighter colour was seemingly the result of the presence of chalk dust and chalk micro-fragments. Again the compact topsoil was removed using hand tools; it proved to be comparatively thin at 0.18m, probably due to soil creep/erosion down-slope to the east. Close scrutiny of the loose spoil generated, together with metal detecting, resulted in the recovery of a small Roman coin, an AE4 copy RF 6001. The details of the latter were unfortunately illegible and it can only be assigned a date bracket of c. AD 270-365. Two very small sherds of Roman pottery and a small strip of lead (L106) were the only other finds recovered from the topsoil.

Cleaning at the base of the topsoil showed natural chalk which was here down to jointed bedrock, with no till or periglacially disturbed chalk brash present over the bedrock. Hence this slope was indeed denuded. One archaeological feature was present, comprising a narrow linear cut [6002] into the bedrock, aligned approximately west-north-west to east-south-east and extending beyond the limits of the trench to west and east. This cut was c. 0.32-0.4m in width and was exposed for c. 3.6m. It was of shallow gully form, surviving to a depth of 0.10-0.12m below the present top of the natural and of rather v-shaped profile. The fill of this feature (6001) was a darker brown than the topsoil (10YR

4/4) consisting of a compact silt with clay and loam, with near abundant angular chalk fragments, with some angular flint; it contained no finds. A disturbed area by the northern edge of the trench, cut [6004], c. 0.3m by 0.16m in plan, and, at most, 50mm in depth, seems more probably the base of a feature, though possibly had a natural explanation; again its silty fill, (6003), yielded no finds.

Discussion

The absence of any cover of glacial till below the topsoil mirrors the situation at Trench E and evidently that blanket had been lost at this point through erosion of material eastward off this slope. Whilst the location was not currently under cultivation at the time of the Project it is likely that ploughing had normally occurred here in the past, and perhaps until recent years before large machinery and wildlife margins. The absence of a layer of disturbed chalk brash over the chalk bedrock, allied to the presence of a high frequency of angular chalk fragments in the ploughsoil suggests this part of the field had been subject to severe truncation through ploughing. No evidence of rig and furrow cultivation was encountered in this small trench; the area opened may have lain between two furrows. The geophysical survey suggests that rig and furrow cultivation had occurred in this part of the field, but here, on its eastern side, it was aligned south-west to north-east (Fig. 3.12). The linear feature within Trench F is at a cross-cutting alignment relative to the rig and furrow system and is therefore unrelated to it (besides the fact that its morphology differs from the broad shallow profiles of the furrows excavated at Trenches A and C). The regular linear nature of cut [6002] suggests that it is the base of a truncated ditch. It was cut into natural chalk and this had weathered following exposure; that is to

say the surface of the chalk was soft and somewhat rounded implying this was an old feature that had been subject to long term chemical weathering of the surface rather than it being a modern feature. Its alignment tallies with a major linear anomaly traceable for c. 120m apparent in the geophysical survey (Section 3.5.1) following a west-north-west, east south-east course across the slope on the eastern side of Corner Field (Figs 3.12 and 3.13 anomaly 1). Trench F usefully caught this feature; it is insubstantial within the trench but certainly its fill to the east across the field is sufficiently contrasting to the natural subsoil to present a clear differential anomaly. No dating evidence was associated with this feature but it must predate the medieval period given its alignment and apparent age (suggested by the weathering). It seems too to relate to a broader series of linear features that show past landscape organization within Corner Field. Thoughts that a bulk soil sample might provide useful evidence were weighed against the shallow depth of [6002] and the proximity of the modern topsoil whereby the probability of contamination was a factor.

4.8 Summary Data for the Quantities of Pottery and Bone recovered from the excavated Trenches

Tables 4.8 and 4.9 show the quantities of pottery and bone/bone fragments recovered for the five main trenches (using the aggregate data recorded per trench prior to specialist examination and including all contexts). Trench C produced the largest number of sherds amounting to half the excavated sample by count and weight. Trench D produced the second highest tallies. Overall the distribution of the pottery is broadly consistent with the size of the trenches showing a fairly even frequency, with the exception of proportionately less pottery from Trench E, probably explained by its location on the margins of the core site activity. Turning to the bone, the distribution is more even across the trenches by number (Table 4.8), though again less in the case of E. The figure for B is boosted by some presence of very highly fragmented bone. By weight the order of frequency reflects that of the pottery (Table 4.9). Table 4.10 shows the gross average figures for weights of sherds and bone per trench. These are uniformly low weights showing that these main categories of material are at an advanced state of fragmentation, suggesting that much of the material has undergone movement and been subject to processes prior to deposition in the contexts

from which it was recovered. This condition is a general feature seen across all excavated trenches. By comparison the average sherd weight in respect of the assemblage from Glebe Farm, Barton upon Humber, dating to the later Roman period, was 16g (pers. comm. Peter Didsbury), in other words c. 50% higher than at Hatcliffe Top. Taphonomic and volumetric aspects of the recovered finds are examined in Chapter 11.

Table 4.8 Numbers of pottery sherds and numbers of bones/bone fragments per trench and the percentage these totals represent of the aggregate total of sherds and bones/bone fragments

Trench	Number of Pottery Sherds	% of Total	Number of Bones/Bone Frags	% of Total
A	448	14.6	571	18.6
B	396	12.9	772	25.2
C	1560	51.0	771	25.1
D	546	17.8	645	21.0
E	113	3.7	311	10.1
Totals	3063	100.0	3070	100.0

Table 4.9 Weights of pottery sherds and bones/bone fragments per trench and the percentage these totals represent of the aggregate total weight of sherds and bones/bone fragments

Trench	Weight of Pottery Sherds	% of Total	Weight of Bones/Bone Frags	% of Total
A	4558	14.8	5717	21.9
B	3186	10.3	3941	15.1
C	16164	52.3	7822	29.9
D	6370	20.6	7239	27.7
E	610	2.0	1400	5.4
Totals	30888	100.0	26119	100.0

Table 4.10 Average sherd weights and average bone/bone fragment weights per trench and overall

Trench	Average Sherd Weight	Average Bone/Bone Frag. Weight
A	10.2	10.0
B	8.0	5.1
C	10.4	10.1
D	11.6	11.2
E	5.4	4.5
A-E Mean	10.1	8.5

Chapter 5

The Prehistoric Artefacts from Hatcliffe Top

Barry Bishop, Steven Willis and Geoff Halliwell

5.1 Lithics from the Fieldwork at Hatcliffe Top, 2005-16

Barry John Bishop

5.1.1 Introduction

A total of 19 pieces of struck flint collected during the fieldwork at Hatcliffe Top were submitted for identification and reporting, all of which were recovered from unstratified soil horizons. One piece came from the excavated trench of 2005, seven from the excavated trenches 2007-2015, four from systematic fieldwalking in Stable Field, and six from systematic fieldwalking in Home Field+, plus another piece from the latter field found by the County Archaeologist during a 'walk-over' (Figs 3.15 and 3.17). A full description of each piece is provided in Table 5.1. Further pieces collected principally by the late County Archaeologist, Hugh Winfield, from the same general area and in his possession, are reported separately in Section 5.2 as they were not available at the time when the present report was written.

5.1.2 Raw Materials and Condition

With the exception of two pieces the struck assemblage was made from a fine-grained 'glassy' flint that varied in colour but with the majority being a translucent black with frequent opaque lighter grey mottling. Cortex is present on just over half of the pieces and varies from being rough but weathered to smooth worn, with thermal (frost fracture) scars also common. Such flint does not originate from the Lincolnshire chalk and can only be found as sub-angular pebbles and small cobbles within the region's glacial tills, or as reworked material in riverine deposits (Henson 1985). The two exceptions comprise a flake from the

ploughsoil in Trench C (A 3) and a core (A 9) from Home Field+ (Fig. 5.2 A 9), made from an opaque 'stony' grey flint, typical of that formed in the chalk of the Lincolnshire Wolds. Both types of flint were used extensively through Lincolnshire during the prehistoric period (e.g. Guirr *et al.* 1989; Phillips 1989c; 1989d; Phillips *et al.* 1989; 1990; Bishop forthcoming), although the latter types appear relatively under-represented here, a situation noted at some other sites in this part of the Wolds (e.g. Phillips 1989d; Healy 1993; Bishop 2013). As it is brittle and not ideal for knapping the 'local' flint may only have been preferred where the better knapping quality 'glassy' flint could not be easily obtained from local tills or alluvial deposits. All of the struck flint shows some degree of post-depositional damage and in some cases this is quite severe, as might be expected from a residually deposited assemblage (see also B 6 below).

5.1.3 Typology, Technology and Dating

5.1.3.1 Mesolithic / Early Neolithic

Dating and interpreting a small assemblage such as this is not straightforward but a number of tentative observations can be made. No truly chronologically diagnostic implements are present but the technological attributes of the assemblage suggest that at least two main periods of flint use are represented. The earliest pieces comprise two blade cores, a prismatic blade and a blade-like flake, which are characteristic of Mesolithic or Early Neolithic industries. To these may be added a narrow flake and two fragments of possible blades, which are probably of a similar date.

The assemblage is small and no retouched pieces are present, meaning little can be said concerning the nature of the activities conducted at the site, although it would appear to include core reduction. There is little evidence for the Mesolithic or Early Neolithic in

the vicinity bar the finds collected by Hugh Winfield (see below 5.2). Although a substantial scatter of flint was collected close-by during the 1960s (Whitwell 1967, 31; NMR TA 20 SW 12; HER 0438/1/0), these items turned out, following expert examination, not to be artefacts (cf. Section 3.2; Fig. 3.3).

The assemblage conforms to a pattern widely repeated across Mesolithic and Early Neolithic Lincolnshire. For both periods, the available evidence overwhelmingly comprises small collections of struck flint collected from the surface or found residually within later features (cf. Wessex Archaeology and Jacobi 2014). The most plausible interpretations for such sites are that they represent temporary campsites or convenient stopping points within much wider networks of movement and inhabitation. As is the case here, the most intensive uses of flint during these periods appear to focus around springs and streams, particularly those lining the major rivers or which form routeways linking the Wolds with the main drainage basins or other lower lying areas (e.g. Chowne 1988; Bennet 2009; Bishop forthcoming).

5.1.3.2 Later Prehistoric

The remaining pieces provide a marked contrast with the earlier material. They comprise a collection of broad, thick and often badly struck flakes, many having wide and markedly obtuse striking platforms comparable to Martingell's 'squat' flakes (1990; 2003). They can only be described as crudely produced and reflect an unstructured approach to reduction, albeit one that was clearly successful with suitable working edges being produced with a minimum investment of skills. Such techniques are typical of later prehistoric flintworking practices, particularly those of the latter parts of the second or the first millennium BC (Herne 1991; Young and Humphrey 1999; Ballin 2002; Humphrey 2003).

Of particular interest is that amongst the eleven or so flakes that fall into this category, six retain convincing evidence for having been retouched; others may have been additionally worked but cannot be positively identified as such due to heavy post-depositional chipping. The six convincing examples are all fairly similar and were made using rather crudely produced flakes of similar size with uneven and sporadic steep scalar retouch around parts of their perimeters (Table 5.2; Fig. 5.1 nos 1-6). They resemble and may have been used akin to formal scrapers, although with most the edges are rough and ragged and they may be more closely related to denticulated implements, which are commonly present in later prehistoric assemblages (e.g. Bishop

forthcoming). Their uses are unknown and they are likely to have been employed for a variety of tasks. One possibility is that some were associated with hide working or 'combing' fibrous plants such as flax or nettle (Juel Jensen 1994; Hurcombe 2007). A similar use has been suggested for comparable denticulations on bone tools from Welland Bank Quarry located on the southern Fen edge (Albarella and Viner 2007; cf. Northe 2001; Morganstern 2011). Whatever uses they were in actuality put to, the high proportions of flakes exhibiting retouch and the similarities in their form suggest a degree of specialist activity.

One of the retouched pieces, catalogue item A 11, from Home Field+, is particularly interesting. Along with sporadic retouch around its perimeter it exhibits numerous deeply engraved striations and polish-like gloss extending from its retouched proximal end and across half of its ventral surface (Fig. 5.1 no.5). The applications that could have resulted in such wear are difficult to envisage, but it is indicative of repeated rubbing on hard materials and although it appears to have been caused from using the flake as a tool, it is possible that it was carried out as a means to deliberately polish the flake. Such use-wear traces on later prehistoric tools are very rare. Possibly the only even approximately comparable examples are the collection of flakes with polished distal ends that were recovered from an infilled Middle Bronze Age ditch in Maidstone, Kent, although many differences remain and those from Maidstone were probably made for ornamental, aesthetic or ceremonial purposes, a perhaps unlikely explanation for the example here (Bishop 2006).

Both the retouched and unretouched flakes were found widely scattered across the investigated areas and reflect a pattern frequently seen in later prehistoric flintwork assemblages. For the most part flint appears to have only been knapped when needed, was used immediately and casually discarded in and around the settlements and field-systems within which it was used (Edmonds 1995, 186). In other words, this was an unstructured and improvised approach, wherein sharp edges were fashioned for direct need, adapted as required. The material here certainly suggests close-by settlement and its dating is interesting in respect of the subsequent Roman period occupation that forms the focus of the investigations, though it does not mean there was a continuity in settlement from the later prehistoric period to the Roman era. The most likely periods of manufacture are the late second or first millennium BC. Whilst they pre-date the occupation revealed by the stratified evidence reported here, their presence indicates that use of the area had an earlier ancestry.

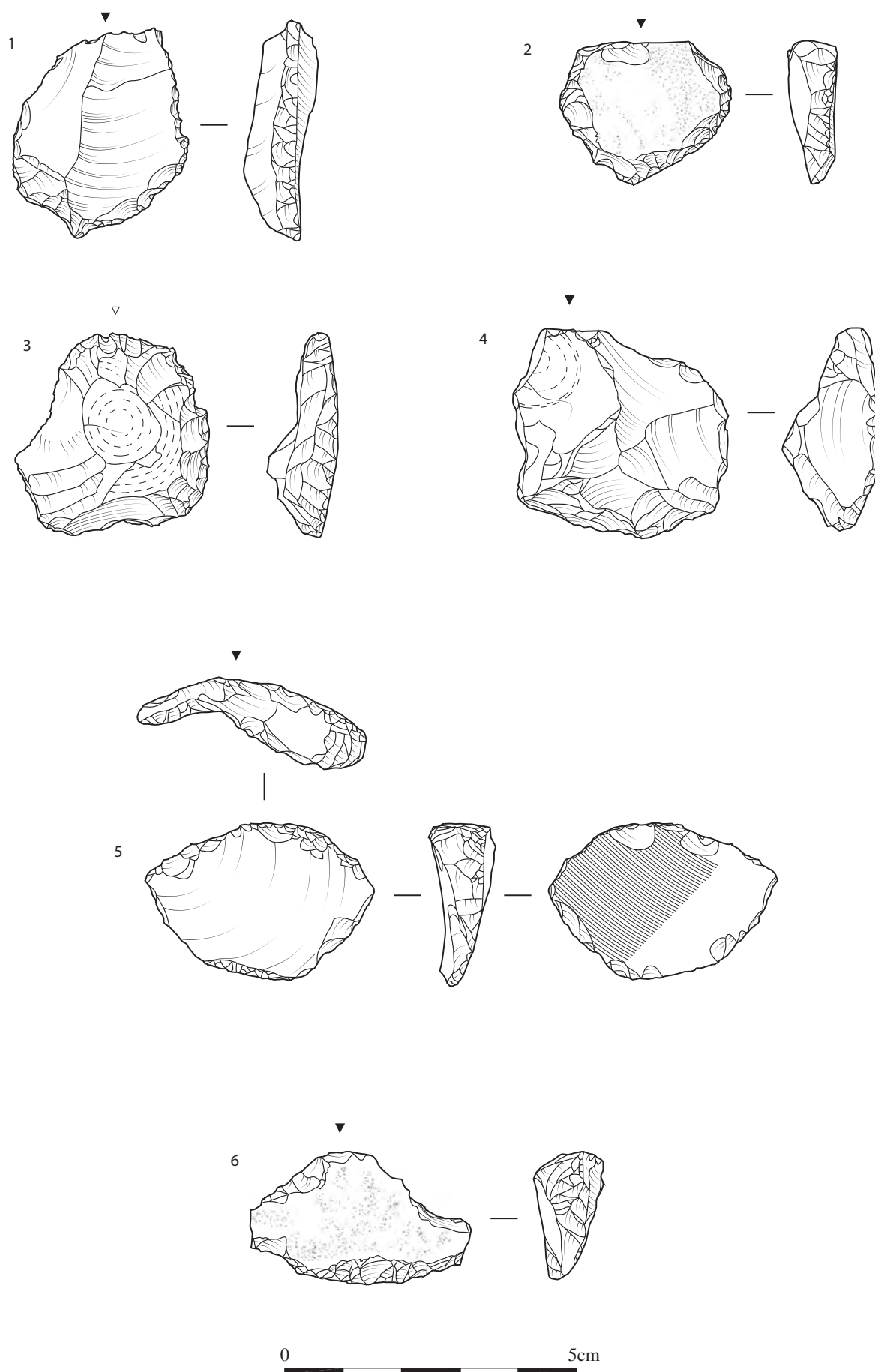


Fig. 5.1 Six retouched flint implements from the fieldwork at Hatcliffe Top 2005-2016.

Table 5.1 Catalogue of the Lithics from the fieldwork at Hatcliffe Top, 2005-16.

Catalogue Number	Trench / Field	Context	Type	Colour	Cortex	Condition	Suggested Dating	Comments
A 1	2005 Trench	Interface Plough-soil and Nat Clay	Blade-like flake	Translucent mottled dark grey / light grey 'glassy' flint	Thin, rough	Chipped	Meso / E Neo	Only identified from a single photograph - see archive. This appears to be a relatively thick flake with parallel dorsal scars.
A 2	A	1001 Plough-soil	Retouched flake	Stripy semi-translucent 'glassy' grey flint	None	Chipped	BA	Flake with double bulb-of-percussion and irregular retouch around much of perimeter
A 3	C	3005 Plough-soil	Flake	Opaque light grey 'stony' flint	None	Chipped	Meso-EBA	Narrow, possibly retouched
A 4	C	3768 Interface Plough-soil and Nat Clay	Blade - prismatic	Semi-translucent speckled mid-grey 'glassy' flint	None	Chipped	Meso / E Neo	Relatively thick, struck from a single platformed core
A 5	D	4000 Plough-soil	Retouched flake	Translucent mottled dark grey / light grey 'glassy' flint	Smooth worn	Chipped	BA	Badly detached cortical flake with irregular steep scalar retouch around most of perimeter.
A 6	D	4039 Interface Plough-soil and Nat Clay	Fragment	Translucent mottled dark grey / light grey 'glassy' flint	None	Slightly chipped	?Meso / E Neo	Tip of possible prismatic blade
A 7	E	5000 Topsoil	Retouched flake	Semi-translucent speckled mid-grey 'glassy' flint	None	Chipped	BA	Thick flake with a ventral surface predominantly formed from a thermal scar and irregular retouch along left margin and distal end
A 8	E	5000 Topsoil	Retouched flake	Translucent mottled dark grey / light grey 'glassy' flint	Thermal	Chipped	BA	Thick flake with a ventral surface predominantly formed from a thermal scar and irregular retouch around distal end
A 9	Home Field	In 2005	Core - blade	Translucent mottled dark grey / light grey 'glassy' flint	None	Slightly chipped	Meso / E Neo	Found by County Archaeologist, described on HER as "3cm by 2.5cm Mesolithic core, slightly plough damaged. Made of an opaque but fine grey flint with colour changing from dark to light roughly halfway through the tool. Slightly hooked in shape". 19 grams HER 0076/1/0 See also the note by Geoff Halliwell below.
A 10	Home Field	Line 13	Core - blade	Translucent mottled dark grey / light grey 'glassy' flint	Smooth worn	Chipped	Meso / E Neo	'Quartered' chunk with a series of blades removed from a finely edge trimmed and possibly faceted platform on one face. 37grams
A 11	Home Field	Line 27	Retouched flake	Translucent brown 'glassy' flint	Smooth worn	Chipped	?BA	Thick broad flake with edge retouch and multiple striations and glossing on ventral surface

Catalogue Number	Trench / Field	Context	Type	Colour	Cortex	Condition	Suggested Dating	Comments
A 12	Home Field	Line 45	Flake	Semi-translucent light grey 'glassy' flint	None	Chipped	BA	Wide platform with numerous undeveloped Hertzian cones. Possible inverse retouch
A 13	Home Field	Line 50	Flake	Translucent mottled dark grey / light grey 'glassy' flint	None	Chipped	Meso / E Neo	Narrow, almost blade-like, struck from a multi-platformed blade core
A 14	Home Field	Line 56	Flake	Translucent mottled dark grey / light grey 'glassy' flint	Smooth worn	Chipped	BA	Quite 'squat', badly detached
A 15	Home Field	Line 136	Flake	Translucent mottled dark grey / light grey 'glassy' flint	Thermal	Chipped	?BA	Thick, poorly struck, very battered
A 16	Stable Field	Line 10	Flake	Translucent mottled dark grey / light grey 'glassy' flint	None	Chipped	?Meso / E Neo	Small and distal missing but possibly a blade?
A 17	Stable Field	Line 12	Flake	Translucent mottled dark grey / light grey 'glassy' flint	Smooth worn	Chipped	?BA	Badly detached
A 18	Stable Field	Line 13	Retouched flake	Translucent mottled dark grey / light grey 'glassy' flint	Thin, rough	Chipped	BA	Cortical, thick wide flake with steep scalar retouch around distal end
A 19	Stable Field	Line 32	Flake	Translucent brown 'glassy' flint	Rough, weathered	Chipped	BA	Thick with wide platform but very battered

Table 5.2 Description of Retouched Implements.

Trench / Field	Context	Length (mm)	Breadth (mm)	Thickness (mm)	Description	Figure Number
A	1001	33	31	10	Flake with irregular steep scalar retouch around much of perimeter, possibly forming a spur-like point at distal end (cf 'nosed scraper') but heavily chipped	Fig. 5.1.1
D	4000	25	29	9	Cortical flake with irregular steep scalar retouch around most of perimeter	Fig. 5.1.2
E	5000	35	33	11	Poorly detached flake with irregular steep scalar retouch at proximal end extending along left margin and around distal end	Fig. 5.1.3
E	5000	37	35	16	Poorly detached flake with irregular steep scalar retouch around distal end	Fig. 5.1.4
Home Field	Line 27	35	28	9	Flake with steep, coarse scalar retouch around proximal end, irregular bifacial retouch around distal end and multiple striations and glossing covering part of ventral surface	Fig. 5.1.5
Stable Field	Line 13	20	37	12	Cortical thick wide flake with steep scalar retouch along long and slightly convex distal end	Fig. 5.1.6

5.2 Lithics from Hatcliffe Top, collected around the time of the Fieldwork

Steven Willis and Geoff Halliwell

5.2.1 Catalogue

Subsequent to Dr Bishop writing his report twelve further pieces of worked flint became available for study. These had been collected principally by the County Archaeologist, Hugh Winfield, who had discovered them in two sets of visits. The first visits were between 2005 and 2007 as the current Project was in its earlier stages, the second visits in December 2017 as he sought to assist the present research at Hatcliffe Top. He accordingly sent these finds through for reporting in this volume. It was not possible for Dr Bishop to examine these items. Flint A 9 from Home Field+, which was catalogued by Dr Bishop from the NE Lincolnshire HER (record 0076/1/0), was included together with these twelve items and further information is therefore added here (below). The 2005-7 finds come from an area on the south-east side of Corner Field and from Stable Field (see Fig. 3.3, HER 0646/1/0 and HER 0645/1/0 respectively). The 2017 finds were collected from Home Field+ and the northern margin of the adjacent field to the south known as 'James Garth', one being a discrete group of finds from the north-west corner of Home Field+ (C 1 etc.) and another from the adjacent field to the south (C 2); their locations are recorded on Fig. 3.15 together with those for the flints from the line-walking of Home Field+. The dates and technical descriptions are provided here by Geoff Halliwell.

From Home Field+ (Figs 3.3 and 5.2)

A 9. This piece is catalogued above by Dr Bishop (see Table 5.1) though he did not have an opportunity to see the piece but had to work from the HER record in this case. Geoff Halliwell has since examined this piece and assists in the following report. This is a small remnant 'pyramidal' core. There is one platform and small narrow blades will have been taken from one top. As with other pieces from Hatcliffe Top it lacks patination. The piece approximates to Grimes Graves Class B2 (Mercer and Saville 1981, F52). A similar core, 50mm in length, was recovered by Phillips' team during intensive survey from her field WN2800 to the west of Wold Newton c. 5km due south of Hatcliffe Top (Phillips 1989b, 28, figs 2.1 and 2.5.1). Such a small core

would not normally be Neolithic but shape and small size suggest an early Neolithic date. (See above for measurements and weight). (Fig. 5.2 A 9).

From the south-east edge of Corner Field and from Stable Field (Figs 3.3 and 5.2)

B 1. From Stable Field. All round scraper in light grey flint, mottled with pale chert inclusions, perhaps 'local'. Some cortex survives at the centre of the surface of one side. All round or disc type scrapers tend to be Neolithic. This piece is similar to examples published from Weelsby Avenue, Grimsby (Sills 2001, fig. 6.6, bottom row: left and centre) and by Butler (Butler 2005, fig. 53). Date: Neolithic. L: 36.5mm; W: 33mm; T: 9mm. HER 0645/1/0. Fig. 5.2 B 1.

B 2. All round scraper in dark translucent flint, highly suitable to tool manufacture. A tiny area of cortex survives. A similar slightly larger scraper, tentatively attributed a Neolithic date, was recovered in the area of Willoughby to the east of the southern extent of the Lincolnshire Wolds during fieldwalking by the Humber Wetlands Survey (Ellis *et al.* 2001, 181, fig. 7.51, Willoughby-12). Date: Neolithic. L: 30mm; W: 21.5mm; T: 8mm. Fig. 5.2 B 2.

B 3. Small end-scraper in dark grey translucent flint. The small size of this piece and the evidence of a little working point to a Neolithic date. A break suggests it may have originally been bigger. This is similar to a piece published by Butler (Butler 2005, fig. 52.5). Date: Neolithic. L: 22mm; W: 16mm; T: 6.5mm. Fig. 5.2. B 3.

B 4. Small end-scraper in dark grey translucent flint. This piece is similar to the above item (B 3) but rounder and with a bulb near one edge. A similar scraper, 25 by 22 by 9mm, was recovered by Phillips' team during intensive survey from her field WN2800 to the west of Wold Newton c. 5km due south of Hatcliffe Top (Phillips 1989b, fig 2.7.2). Date: Neolithic. L: 18mm; W: 17mm; T: 5mm. Fig. 5.2 B 4.

B 5. From Corner Field. Broken blade in pale grey translucent flint. Not much patination. Date: Probably Neolithic but could be Bronze Age. L: 29.3mm; W: 16mm; T: 5mm. Fig. 5.2 B 5.

B 6. From Corner Field. Flake (incomplete), not a tool, in pale grey flint with light margins, with some cortex present. The piece is a chip, perhaps a finishing flake, slightly damaged almost all round, being snapped at each end. Has an unusual patination. Possibly a sharpening flake. Date: Bronze Age? L: 23mm; W: 16.5mm; T: 3.5mm. Fig. 5.2 B 6.

B 7. From Corner Field. Small end-scraper in fairly dark grey flint. Fashioned from a small flake. Has no patination. Possibly a finishing flake expediently

adopted for reuse as a scraper on the narrow end where there is a fine working edge. Date: Possibly Neolithic but perhaps subsequently picked up and adapted for use in the Late Bronze Age or even Iron Age. L: 22mm; W: 14mm; T: 5mm. Fig. 5.2 B 7.

B 8. From Corner Field. Tiny struck piece in grey translucent flint. The piece is a finishing flake from inside a working core, as there is no cortex. There are tiny serrations apparent, not human work. Date: uncertain. L: 20mm; W: 10mm; T: 1.5mm. Fig. 5.2 B 8.

From Home Field+ and the field known as 'James Garth' found in December 2017 (Figs. 3.15 and 5.3)

C 1. From surface of lightly weathered ploughsoil in Home Field+. Tip of flint axe, reworked.

The blade end of a broken Neolithic chipped axe in grey flint, adapted for secondary use. The item is weathered and has some iron staining. The axe blade was serrated, this having been created through alternating chips, first from one side and then the other (see photograph, bottom right). The purpose of the serration may have been to avoid the blade becoming 'wedged-in'. It had broken on both sides at 27mm up from the blade leaving two bevelled facets beyond that point. In addition one flanking side has also broken off. Following breakage the secondary working created a straight edge, at the broken end, opposite the original blade end of the axe, through chipping off in one direction. This produced a small scraper or chopping tool. L (i.e. length of extant fragment of original axe): 45mm; W: 59mm; T: 30mm. HER 0076/3/0. Found by Hugh Winfield. Fig. 5.3 C 1.

C 2. From surface of lightly weathered ploughsoil in James Garth, immediately to the south of Home Field+ (cf. Figs 3.1 and 3.15). Scraper.

Fairly large side scarper, or perhaps end and side scraper, in a mainly off-white creamy flint. Some iron staining occurs. The striking platform is not represented; there is a platform-like facet at this approximate location but attention to the blub shows the original platform is missing, but will not have been much higher up from the surviving piece. This will be a Neolithic tool, a likelihood suggested by the patination, amongst other attributes. L: 51mm; W: 44mm; T: 17mm. HER 0076/2/0. Found by Hugh Winfield. Fig. 5.3 C 2.

C 3. From surface of lightly weathered ploughsoil in Home Field+ found nearby to item C 1 above. Blade, reused as a multiple tool.

Broken thick blade segment adapted for re-use as a small multi-purpose mini-tool in dark brownish-

grey flint similar to that of other items from Hatcliffe Top. The original blade may not significantly predate the retouching/reuse episode following its breakage, not least as there is no patination. It has been finely re-touched more or less all the way round and mainly from one side, to create a scraper with some work potentially for the purpose of blunting the original blade edge. This flint comfortably 'comes to hand'. A notch present at one end could have been created through 'crushing' in use. Uses in debarking, working surfaces and piercing are possible functions. Late Bronze Age or perhaps Iron Age. L: 34mm; W: 23mm; T: 8mm. HER 0076/3/0. Found by Hugh Winfield. Fig. 5.3 C 3.

C 4. From surface of lightly weathered ploughsoil in Home Field+ found nearby to item C 1 above. Spread of debitage.

An example of the debitage collected by Hugh Winfield was available for examination. This is a coarse shatter-flake of mid-grey flint, probably local to the Wolds. With only a tiny slither of cortex remaining on one side the item is largely split from the inside of a flint that was being worked, with this flake showing typical signs of forceful detachment resulting from a heavy blow. There is no patination. Other debitage items not collected were reported by Hugh Winfield (pers. comm.) as opaque, some with iron staining. The quality of the flint thought to be debitage, the area/size of the spread and the nature/shape of the flakes etc. all point to an origin as manufacturing debris rather than accidental creation, for instance, via plough impacts (pers. comm. Hugh Winfield). Generally, flint debris such as this suggests either the making of tools or the breakage of flints for some other, less apparent, purpose. L: 45mm; W: 35mm; T: 7mm. HER 0076/3/0. Found by Hugh Winfield. Not illustrated.

5.2.2 Commentary

As with the material examined by Dr Bishop these worked pieces suggest Neolithic activity occurred nearby to these find locations at Hatcliffe Top, probably with more than one focus. The smallness of the items and the lack of damage suggest that they could have been dislodged and incorporated into modern ploughsoil comparatively recently, from pits, surfaces or other features. This would be consistent with the impression Hugh Winfield had that the pieces from the south-east edge of Corner Field, approximately half-way across the field (south-west to north-east, see Fig. 3.3), could be associated with pits suggested by discrete/confined surface traces



Fig. 5.2 The worked flint principally collected by Hugh Winfield from Hatcliffe Top 2005–7.

of bone and flint flakes, visible around the time of discovery, though not observable in the ploughsoil since (pers. comm. Hugh Winfield). The overall number of collected pieces is modest compared to some assemblages recovered by Phillips' team through their transect (Phillips 1989b), though that survey found that concentrations were rare. The current material, whilst not necessarily indicating occupation, is significant as there are otherwise no such dated collections recorded from the north-east Wolds north of Newton Wold, c. 5km to the south of Hatcliffe Top (pers. comm. Hugh Winfield), and with Phillips' report more focused upon artefact type and distribution rather than date. The evidence from Hatcliffe Top may represent stopping points as people moved through the landscape and up and down the valley, consistent with previous observations as to the importance of, and preference for, wet valley locations in the late Mesolithic into the Neolithic (e.g. Schofield 1987).

More intensive attention was paid in the course of the fieldwork reported here to Corner Field and Stable Field rather than Home Field+ and the relatively sparse number of lithics recovered may be a reliable pattern in the case of those two fields. They face, to the east, the low lying Marshland and beyond that the North Sea so it is possible that this higher land was not thought ideal for settlement or much periodic activity as it was too exposed. Finds from the western side of Home Field+ and the field known as James Garth could indicate a preference for activity by the micro-valley at this location that leads north-west to the Waithe. These days this water course is seasonally 'wet' formalized drainage ditching rather than a natural course. This is a more sheltered location that in the past probably had a seasonal if not continual flow of water (Figs 3.1, 3.15 and 3.19). Further prospection survey in this locality, to follow-up the present work, would be a helpful step forward. The next tributary valley along the Waithe, a little further into the Wolds to the south-west (joining the Waithe by 'X A' on Fig. 1.2), has several recorded find-spots of lithic items arising from surface recovery. These come from its western slopes in particular, as it runs north through East and West Ravendale parishes before dividing around Round Hill, prior to joining the Waithe. The collections come from the west side of Hatcliffe Plantation valley, and from higher ground above West Ravendale and East Ravendale and are said to include cores, artefacts and flakes (Whitwell 1967, 31, TA 222 005, TF 222 996, between TF 220 000 and 224 990, and TF 233 996), while a Group VI polished stone axe was found by the B1203 above

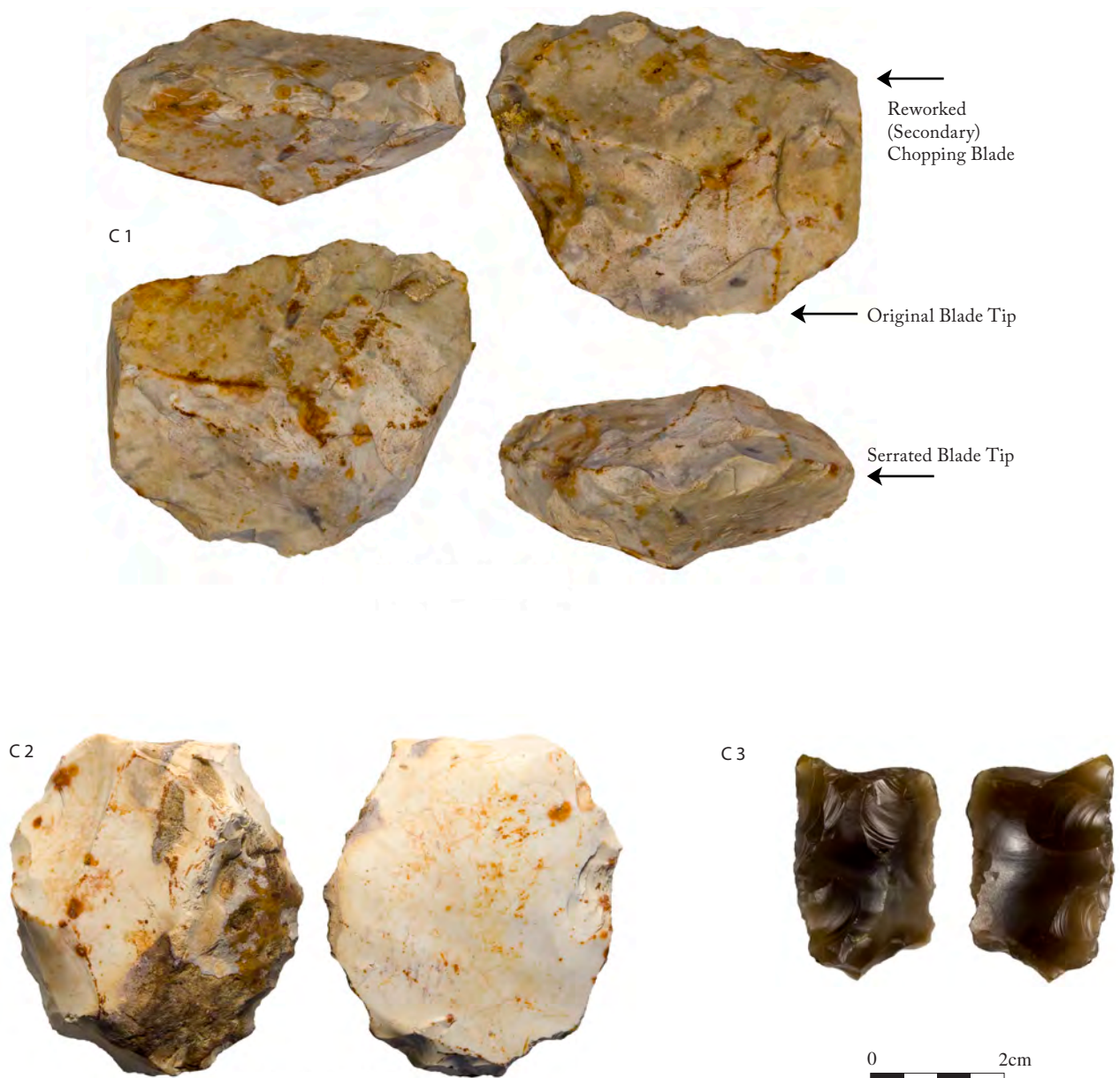


Fig. 5.3 Worked flint collected by Hugh Winfield from Hatcliffe Top 2017.

East Ravendale (Loughlin and Miller 1979, 171, TF 2300 9856). The flints were not catalogued or reported in detail and it is not possible to gauge from such evidence whether there was a more concentrated use or settlement of this tributary valley, around East and West Ravendale. Again this is an area that would benefit from further enquiry.

Generally, knowledge of the Neolithic landscape in eastern and north-east Lincolnshire is very limited. Comprehension is likely to be enhanced by the current survey of the Lincolnshire long barrows (cf. Section 2.2), which whilst building up further knowledge on known sites, should be a spring point to more extensive research for other types of sites, including settlement.

Chapter 6

The Pottery from Hatcliffe Top

I. M. Rowlandson, H. G. Fiske, Steven Willis and Jane Young

6.1 The Roman Pottery from Hatcliffe Top

I. M. Rowlandson and H. G. Fiske

6.1.1 Introduction

Three thousand and seventy seven sherds (32.675kg, RE 24.41) were recovered in total from the excavated trenches A to F. Of these 193 sherds (6.27% of the assemblage by count) weighing 1.375kg (4.21%) and with an RE of 0.84 were considered to be of post-Roman date and were reported on by Jane Young (see 6.2). The remaining 2,884 sherds (31.300kg, RE 23.57) of Roman or earlier date are discussed here, with the samian considered separately by Steven Willis (see Section 6.1.6). The pottery present contained a small quantity of early Roman sherds but these were mostly residual within groups dating to the 3rd century AD or later. A small number of sherds may represent earlier prehistoric or Iron Age activity on the site but these were small and abraded.

The majority of the Roman pottery present dated to the 3rd century AD or later with good evidence of activity in the 4th century and in the 'Final Roman' period of pottery production in the late 4th century to early 5th century AD (see Rowlandson forthcoming b; Leary 2013, 195; Darling 1977; Darling and Precious 2014). This is an important assemblage of pottery from this period, showing that settlement continued on the Wold edge until the end of the Roman period. The majority of the pottery present consisted of local grey wares, many probably from the Market Rasen area, and shell-gritted Dales ware from west of the Lincolnshire Wolds. Colour-coated wares were well represented and the inhabitants of the site appear to have had access to a range of table ware alongside the typical utilitarian wares. The presence of Crambeck

Parchment ware and Huntcliff type jars showed that pottery produced in north eastern Yorkshire reached the site towards the end of the Roman period.

A selection of one hundred and thirty eight sherds (2.710kg, RE 4.28), recovered during fieldwalking (by line walking and intensive pick-up surveys) by the NELALHS in Corner Field in 2005 (Section 3.4.2) were also presented for study. The items had been selected by Steven Willis on the basis that they were likely to be the most diagnostic pieces, being predominantly feature sherds potentially informative with regard to date, type and source. (Sherds from the fieldwalking surveys thought likely to be of low diagnostic potential (comprising body and base sherds) were not submitted for reasons of economy). An archive of this material has been made and a discussion of it is presented within the text of the main report below. The material presented was broadly similar to the pottery retrieved during the excavations; the full composition and other aspects of that surface collected assemblage are reported above (see 3.4.2).

6.1.2 Methodology

The pottery has been archived using count and weight as measures according to the guidelines laid down for the minimum archive by The Study Group for Roman Pottery (Darling 2004) using the codes developed by the City of Lincoln Archaeological Unit (CLAU) (see Darling and Precious 2014), the fabric series under development for North Lincolnshire Museum, the recent reports on the pottery from the Hornsea Wind Farm Cable Route evaluation, A160/A180 Port of Immingham Improvement scheme and other excavations in the same general area (Rowlandson 2012a; 2013a; 2013b; 2014; forthcoming a; Rowlandson and Fiske 2016; Rowlandson *et al.* 2014; 2017). The East Midlands Iron Age coding scheme has been used for recording the prehistoric

pottery, particularly to provide a method to record rim, body, base and decorative attributes in the archive to facilitate standardised comparisons (Knight 1998). Rim equivalents (RE) have been recorded and an attempt at a 'maximum' vessel estimate has been made following Pollard (1990). The pottery has been bagged by fabric within each context and vessels selected as suitable for illustration (D*, see catalogue) and fabric samples (FTS) have been bagged separately for ease of future reference.

The archive record contains tabulated data that could not be included within this current text given its scale. This comprises: (i) Fabric descriptions, (ii) Quantified dating summaries by context, and (iii) Full quantified archive. This data will be curated in an Access database, available from the author in a digital format.

6.1.3 Taphonomy and Dating

The Roman pottery from the excavated assemblage had a noticeably lower average sherd weight (10.85g) than contemporary groups from recent infrastructure projects (Rowlandson and Fiske 2016, average 20.01g, and Rowlandson *et al.* 2017, 23.52g). The presence of examples of Final Roman pottery (late 4th to early 5th century AD) along with handmade Saxon and middle Saxon vessels raise interesting questions about elements of continuity and the level of residual Roman pottery included within post-Roman deposits. From studies of pottery from Lincoln it was noticeable that the earliest recognised post-Roman groups often consisted of more than three quarters residual Roman material with only limited quantities of Saxon and middle Saxon wares present. This ratio decreased sharply with the commencement of late Saxon pottery production in the city (Young *et al.* 2005, 10-5). Whilst quite different site formation factors took place at Lincoln and Hatcliffe Top the low average sherd weight might raise questions about levels of residual pottery within post-Roman deposits. Volumes of contemporary pottery on Saxon sites are not at all comparable with the abundance of Roman pottery in use in the 4th century AD, thus the relative quantities of pottery from each period may not correspond directly to the levels of human activity on the site. On a rural site with open ditches originally cut in the Roman period there is also the possibility of intrusive material being deposited at a later date (cf. Young, 6.2.). A further possible explanation for the relatively low average sherd weight was that different taphonomic processes in antiquity and modern excavation strategies at Hatcliffe Top resulted in the presentation of a more than usually fragmented assemblage. The excavations

were conducted by a team of Local Society volunteers and students as a research and training exercise without commercial time pressures; that trenches were hand-dug and that there was much use of trowels, doubtless contributed to the recovery for small pottery fragments.

Following the presentation of a preliminary pottery 'spot-date' the pottery is discussed according to the site structure presented in this report. It is recommended that the site report and other artefact reports should be referred to for discussions of the dating of the individual phases.

6.1.4 The Pottery by Fabric

Amphorae

No amphorae were retrieved from the excavations. Given the rural location of this site and bias towards pottery from the 3rd to 4th century AD the absence of amphora sherds was not unexpected.

Iron Age and Roman pottery assemblages from this part of Lincolnshire typically have few amphora or other continental imports. Other assemblages from this region have small quantities of amphorae but sherds often show signs of having been reused as tools (Precious and Vince 2005; Rowlandson and Fiske 2016; Rowlandson *et al.* 2017). This would suggest a limited use of amphorae-born goods although it is possible that exotica were imported in barrels or other containers from local market places.

No amphora sherds were presented for study from the fieldwalking surveys.

Mortaria

MOMD: Midlands mortaria; light fired fabric, precise source unknown.

MONVT: Nene Valley type; light fabric, slag trituration grits (broadly as Tomber and Dore 1998, LNV WH).

MOSPT: Swanpool type; white slipped with slag trituration grits (broadly as Tomber and Dore 1998, SWN WS).

The range of mortaria sherds retrieved was limited. The single Midlands area white ware sherd may have been from a vessel manufactured in the 2nd century AD but was a tiny scrap. The single Nene Valley type sherd may have been manufactured in the 3rd century AD, however the majority of the sherds were of the Swanpool type dating to the late 3rd to 4th century AD. The MOSPT vessels included relatively small

sherds from a broad range of types including examples of hammer head (MHH), Reeded rim (MRR), triangular rimmed (MTR) and wall sided (MWS) mortaria. Vessels of this type have traditionally been considered to have been manufactured at Swanpool, Lincoln, but it is likely that similar vessels were produced at other Lincolnshire kilns such as Linwood Warren (Samuels 1983). Scientific analysis of the pottery from kiln sites and other occupation sites in north eastern Lincolnshire may help to clarify whether there were other sources of production.

No mortaria were presented for study from the fieldwalking surveys.

One vessel is illustrated: Fig. 6.1 No. 1. MOSPT: A mortarium with a triangular rim and internal use wear, Trench D, trench Phase 2, Stoke Pit [4062], fill (4019), Archive Drawing No. D32.

Fine wares

CC: Miscellaneous colour-coated wares.

CC1: Nene Valley type colour-coated ware with a light fired core (Tomber and Dore 1998, LNV WH).

CC2: Nene Valley type colour-coated ware with an oxidised, red core and a dark colour-coat.

CGBL: Central Gaulish Black ware (Tomber and Dore 1998, CNG BS).

CRPA: Crambeck Parchment ware (Tomber and Dore 1998, CRA PA).

GFIN: Miscellaneous fine grey ware (Darling and Precious 2014).

MHAD?: Hadham red-slipped ware (Tomber and Dore 1998, HAD OX).

MRPART: Market Rasen Parisian ware (Tomber and Dore 1998, LMR FR).

OXRC: Oxfordshire red-slipped ware (Tomber and Dore 1998 OXRC)

PART: Miscellaneous Parisian wares (Darling and Precious 2014).

SPCCT: Swanpool colour-coated type ware (broadly as Tomber and Dore 1998, SWN CC).

Other than samian there were few imported fine ware sherds present. A single tiny sherd of Central Gaulish Black ware was retrieved from Trench C. Limited quantities of Central Gaulish colour-coated ware, exclusively from beakers, have been retrieved from sites in northern Lincolnshire including a sherd from the Able UK project at North Killingholme (Rowlandson *et al.* 2017) and from the Mount Pleasant Nettleton/Rothwell site (Leary 2013).

The small quantity of Oxfordshire red-slipped ware (OXRC) present was of interest. It has been

recognised that the Oxfordshire red-slipped ware is mostly found stratified in the latest or 'Final Roman' groups, or as an element in immediately post-Roman assemblages (Darling and Precious 2014; Rowlandson in prep b). Outside of Lincoln this fabric is a rare find in Lincolnshire, as Swanpool oxidised wares (SPOX) may have satisfied much of the popular demand for red/orange table ware during this period (Cool 2006, 230). A quick review of the occurrences of the OXRC fabric shows that, unsurprisingly, it has mostly been found at Lincoln but is rare outside the *colonia* (Darling and Precious 2014). Occurrences include fragments from the Harrowby-Aswardby Pipeline, Market Deeping, Spalding, a late Roman to Saxon site at Normanton in the south of the county, and Mumby on the east coast. Significant towns such as Ancaster, Sleaford, Navenby, Owmbly, Hibaldstow and Kirmington have all produced examples of OXRC. Rural sites with OXRC in the north of the county are rare but include Glebe Farm, Barton upon Humber (Didsbury nd), Immingham (Rowlandson and Fiske 2016) and the Conoco Pipeline and Able UK projects at North Killingholme (Precious and Vince 2005; Rowlandson *et al.* 2017; Rowlandson in prep. B). Away from significant settlements there appears to be a bias towards coastal sites and there is growing evidence of OXRC finds along the north eastern coast of Lincolnshire. As there has been a heavy concentration of excavation work in the north eastern coastal area of Lincolnshire (north of Grimsby) recently it is difficult to be sure if this is due to sample bias or whether there was a greater amount of imported Oxfordshire Red-slipped ware vessels in use in this area. If the latter then it may be that vessels of this type were offloaded from passing coastal trading vessels moving north along the coast.

An oxidised sherd, possibly Hadham red-slipped ware, was also retrieved from Trench C. Occurrences of this fabric are rare from sites in Lincolnshire, even from Lincoln itself where it is only occasionally found in the latest Roman assemblages (Darling and Precious 2014). The only example known to the author from north eastern Lincolnshire was retrieved from the significant Late Roman assemblage from the Able UK project AMEP2 site. The presence of a Crambeck Parchment ware vessel (Fig. 6.1, no. 3, CRPA) this far south is unusual, examples are seen from along the south Bank of the River Humber but seldom further inland (Evans 1988; 1989; Didsbury nd; Rowlandson and Fiske 2016; Rowlandson *et al.* 2017). Examples from Lincoln have been rare (Darling and Precious 2014). CRPA still remains a good indicator of the latest period of Roman pottery use in the north (Bidwell 2005) and the presence of this vessel supports the observation

that activity continued on this site until the end of the Roman period. Along with the Huntcliff jars in the CALGS fabric group it also demonstrates that pottery from north eastern Yorkshire reached the site in the late 4th to perhaps the 5th century AD.

Fine grey ware vessels were well represented amongst the assemblage (GFIN, MRPART, PART), perhaps due to the proximity of the site to the pottery production centre at Market Rasen (17.5km to the south-west). Much of the pottery recorded in the GFIN category was probably manufactured there; some examples of the smooth black archetypal Market Rasen Parisian ware (MRPART, Tomber and Dore 1998, LMR FR) were also noted but some of these, particularly the undecorated material, had a similar fabric to MRPART but had been fired to a more standard grey colour. This presumably arose through inclusion within a firing that was controlled to produce standard grey wares. Only one of the fine grey ware Parisian type vessels recorded appeared likely to be from another source, probably Dragonby or Roxby (Fig. 6.2, see catalogue), where such wares were also produced. If this item is from that source area then it had travelled twice the distance to Hatcliffe Top compared to the versions from Market Rasen. It has been noted (see below) that fine grey wares were more common amongst this assemblage than from the coastal sites at the Brocklesby Interchange and the Able UK AMEP2 site (Rowlandson and Fiske 2016, Rowlandson *et al.* 2017) and it is hoped, with further analysis of those sites in the future, to establish whether the Hatcliffe Top assemblage should be considered anomalous.

Nene Valley type colour-coated wares (CC1-3) were the most common fine wares amongst the assemblage by sherd count and weight. The majority of sherds in this group were in the light-fired core fabric variant CC1. Pottery of this class has traditionally been seen as a product of the Nene Valley area but light-fired clays were exploited at Lincoln and colour-coated wares were made both at South Carlton and within the boundaries of the modern day City of Lincoln (Webster 1944; Rowlandson with Hartley and Monteil 2015; Fiske and Rowlandson in prep.; Rowlandson and Hartley *et al.* in prep.). As such it is difficult to be certain which production centre these sherds were made at. Following the analysis project that is underway it may be possible to recognise products 'in the hand' without chemical analysis but it is possible that discerning different production sources under x20 magnification may not be replicable with certainty. Regardless of this the majority of colour-coated pottery from this site was manufactured utilising light-fired clays probably transported from

sites on Jurassic deposits in the Nene Valley or near Lincoln as there is at present no evidence that such wares could be made using the resources available in the Market Rasen area. The assemblage from this site was heavily biased towards beakers including grooved funnel rimmed, folded and plain rimmed types. Two sherds from rough-cast beakers in this fabric may be from the South Carlton or the Lincoln Newport suburb (Webster 1944; Rowlandson with Hartley and Monteil 2015; Rowlandson and Hartley *et al.* in prep.). Recognisable forms other than beakers were rare but included a straight sided bead and flanged bowl. Fragments from beakers in the red/orange cored CC2 fabric included paint decorated types and a slit folded example that ought to date to the 4th century AD. The light-orange core variant CC3, similar to examples made at the Lincoln Newport kiln and those recorded from Brough on Humber by Darling (2005), was scarce with most sherds from beakers. Swanpool type colour-coated ware was also rare with no sherds that could be securely attributed to a form type. Examples of Swanpool Oxidised wares are discussed with the oxidised wares below, following the groupings used in the Lincoln pottery corpus (Darling and Precious 2014). The majority of vessels in this fabric were table ware forms and probably fulfilled a similar function to the Swanpool colour-coated wares (see grouping by Leary 2013, 233).

Few fine ware sherds were present amongst the material presented for study from the fieldwalking surveys. The vessels represented were restricted to fine grey ware beakers including a necked beaker and one with a pedestal base.

Illustrated vessels comprise:

Fig. 6.1 No. 2. CC1: A bowl with a plain rim in a Nene Valley type colour-coated ware. Trench C, trench Phase 2, Post Setting [3025], fill (3024), D10.

Fig. 6.1 No. 3. CRPA: A paint decorated Crambeck Form 10 platter. Trench C, medieval Furrow [3720], fill (3713), D22. (See also Fig. 6.5).

Fig. 6.1 No. 4. GFIN: A beaker with a similar surface colour to GREY1 examples but a fine fabric. Trench C, trench Phase 3, Flue [3745], fill (3721), D24.

Fig. 6.2 PART: A sherd from a fine grey beaker with Parisian ware style fern stamps. This pale grey fabric with fine black, probably ferrous rich, inclusions is probably a finer variant of the Dragonby grey ware (NWLGR) and the fern stamp is similar to an example illustrated from Dragonby (Elsdon 1982, figs 7.78 and 10.47). Examples of fern stamps set at right angles are also known from the same source (Elsdon 1982, fig. 10.60). Trench C, trench Phase 4, Ditch [3508], fill (3506), D33.

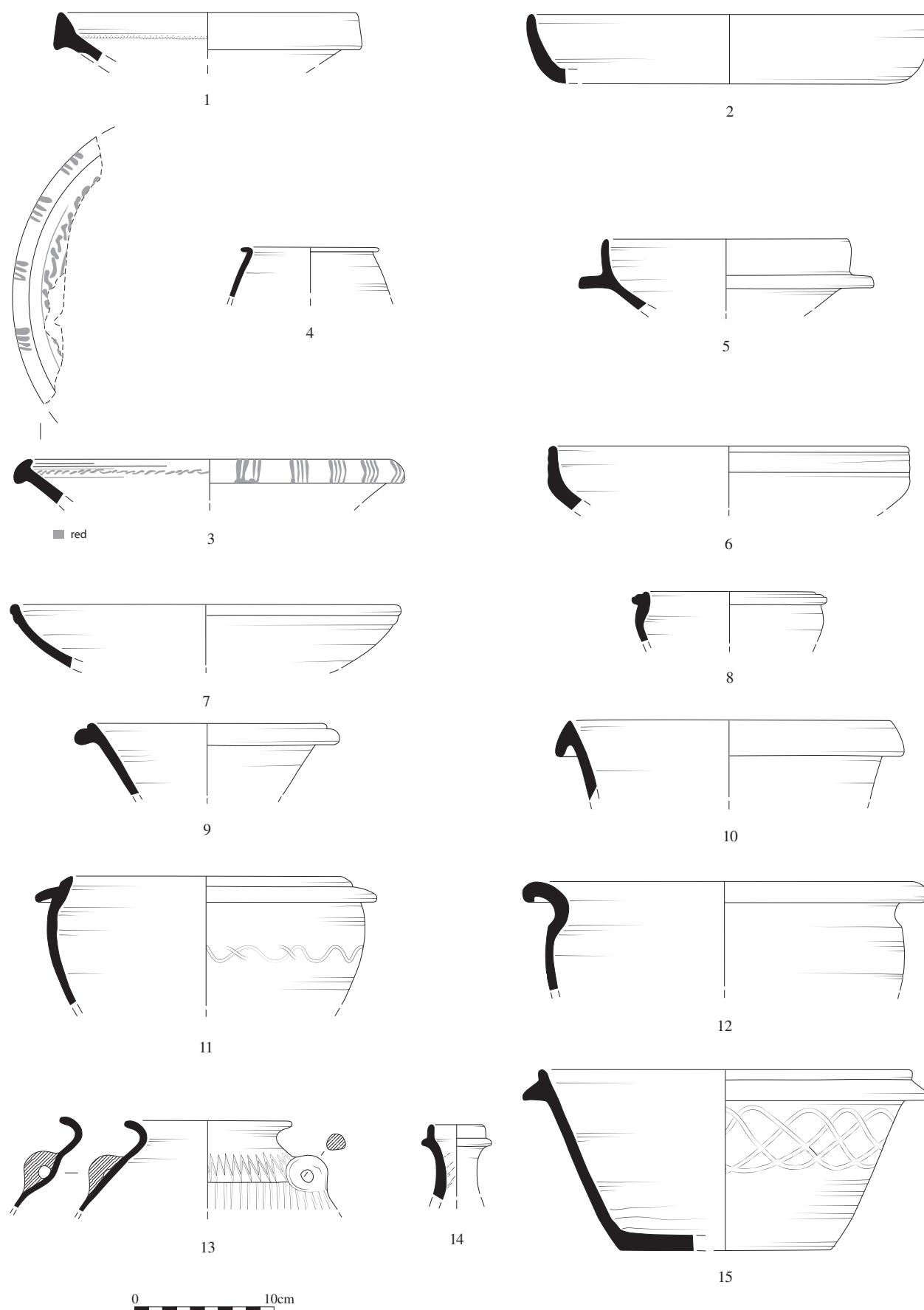


Fig. 6.1 Hatcliffe Top Roman pottery (Nos 1-15).

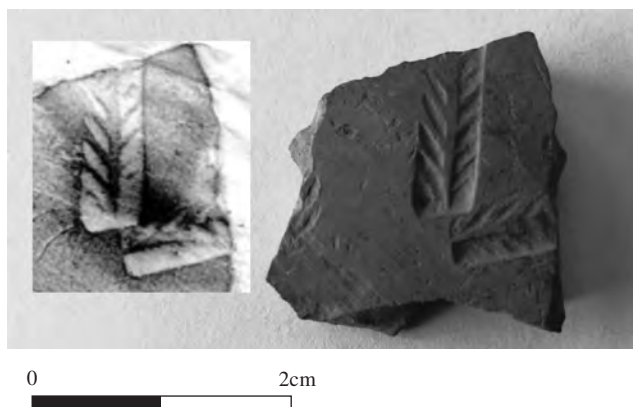


Fig. 6.2 Rubbing (left) and photograph of the fine grey ware vessel in fabric PART with fern leaf decoration from context (3506).

Oxidised wares

Late Roman burnished vessels in the Swanpool oxidised tradition were more common than fine wares. The majority of the material present has been characterised as ‘Swanpool type’ (SPOXT) as a number of other industries in north Lincolnshire, including Messingham and kilns in the Market Rasen area, made similar wares. Other more ambiguous examples have been attributed an OXB code (Fig. 6.1 nos 5–8) but were probably of the same Late Roman tradition. Whilst the quartz within Lincoln/Swanpool fabrics (see Darling and Precious 2014, 62–3 and 121–2; Tomber and Dore 1998 SWN CC) appears different to the typical Market Rasen area material it may be that there were further kilns in northern Lincolnshire producing similar material to the Lincoln fabric. One vessel with painted decoration from Gully [3771] did appear to be a good match to fabric samples from the Swanpool kilns. The range of forms was dominated by open bowl or dish types including copies of samian form Drag. 31/31R, hemispherical bowls derived from samian form Drag. 38, straight sided bead and flanged bowls and plain rimmed dishes. Sherds from beakers were rare; only three were recorded including a rim from a funnel necked vessel. A further sherd with painted decoration was retrieved from the sieved residue of the Environmental Sample from context (4017) (pers. comm. Steven Willis; not included in the material recorded in this report; see below under 6.1.5 Trench D). This range of forms was typical of that seen on the Swanpool kiln site (Webster and Booth 1947) and the City of Lincoln (Darling and Precious 2014). Although it is suggested that production of this type of oxidised ware began in the later 3rd century AD it is clear from Lincoln that it was mostly rare until the second half of the 4th century AD (Darling

and Precious 2014). This pattern would also appear to fit with a significant late Roman assemblage from Navenby (Rowlandson *et al.* 2015), and a preliminary study of the material from the Able UK AMEP2 site suggests a similar pattern (Rowlandson *et al.* 2017).

A single coarse quartz-gritted oxidised ware was represented in a basal sherd from a jar (OXC). Vessels in the Late Roman coarse quartz-gritted fabric LCOA have been seen on kiln sites misfired to an oxidised orange surface colour and it is likely that this vessel represents a misfired equivalent of this tradition, broadly similar to the GREYC vessels recorded from this site (cf. below). A small quantity of abraded oxidised sherds, many from post-Roman features and which could not be securely attributed to a fabric group, were recorded as OX. It is likely that a number of these sherds were from Late Roman Swanpool type colour-coated or oxidised ware vessels. No oxidised ware sherds were presented for study arising from the fieldwalking in Corner Field.

Illustrated vessels comprise:

Fig. 6.1 No.5. OXB: A hemispherical flanged bowl in a burnished oxidised fabric. Trench C, trench Phase 2, Trackway and Surface [3504], fill (3500), D04

Fig. 6.1 No.6. OXB: A bowl in a burnished oxidised fabric. Modern ploughsoil, Corner Field, Layer (1000), 2007 season, D04

Fig. 6.1 No.7. OXB: A dish in a burnished oxidised fabric. Trench C, medieval Furrow [3720], fill (3778), D16

Reduced wares

BB1: Black Burnished ware 1 (Tomber and Dore 1998, DOR BB1). A limited quantity of this ware was present; diagnostic forms were restricted to a dish with a plain rim from context (4002) and a jar with an out-curved rim from context (3007).

BB2: Black Burnished ware 2 (see Darling and Precious 2014). A single basal sherd was retrieved from context (3740).

BBT: Black Burnished ware 1 type fabric (source uncertain). A single basal sherd was retrieved from context (3502) that could not with certainty be attributed to a Dorset production source.

Limited quantities of imported Black Burnished ware 1 and 2 products have been recovered from Immingham and the Able UK Marine Energy Park scheme (Rowlandson and Fiske 2016; Rowlandson *et al.* 2017). Amongst the Late Roman AMEP2 assemblage from the Able UK site, BB1 made up only 0.19% by sherd count and BB2 just 0.02%.

BB1 was most common at Immingham at 0.45% by sherd count. The assemblage from Hatcliffe Top falls within a similar bracket, with less than 0.5% of the assemblage being BB1 or BB2. Comparison with amounts from Lincoln (Darling and Precious 2014, fig. 86) or Castleford (Rush *et al.* 2000) suggests that the inhabitants of Hatcliffe Top were not receiving significant quantities of coarse ware pottery from passing coastal traders.

GREY: Miscellaneous grey ware. This group probably includes a range of material from the kilns in the Market Rasen area and also possibly Barnetby Top (Samuels 1983). Where possible the group has been subdivided according to the working fabric scheme for northern Lincolnshire (GREY1-8 below) but some examples could not be attributed with certainty. Examples considered to be possibly from further afield were rare and have been noted in the archive.

GREY1-4: Broadly similar fabrics with moderate to common quartz, sub-rounded, 0.25-0.5mm including some glassy grains. No mica was evident in these sherds. GREY1, 3 and 4 probably represent differing firing conditions of essentially the same fabric (see descriptions in data appendix) but GREY2 included small quantities of calcareous shell or chalk inclusions. It is likely that this group contains products from Market Rasen, Barnetby Top and other kilns in the area. This author has seen material similar to GREY1, 3 and 4 within kiln assemblages from Market Rasen and it is likely that they represent a range of the products from similar kilns. A project of fabric analysis is currently underway which may clarify whether these fabric groupings can be considered to be variants linked to a particular kiln or must be merely considered as 'local'. It has already been noted that distinguishing the products of some of these kilns may not be easily accomplished (Vince 2002a; 2002b; Leary 2013).

The range of forms present amongst the local unburnished grey wares represented the typical suite of vessels seen from local Late Roman kiln sites, such as Elsham, Rookery Lane in Lincoln, Swanpool, Claxby, Linwood Warren and other kilns in the Market Rasen area (see Samuels 1983; and discussion of the fabrics by Leary 2013). Smaller bowls and dishes included hemispherical flanged types and carinated vessels, lipped bowls and bowls with rounded rims (BG225, Gillam 1970, Type 225), bowls with in-turned bead and flanged rims, straight sided bead and flange rimmed bowls, plain rimmed dishes and bowls, strainers and a cheese press. Two examples of dishes with grooved rims, probably of second century

AD date, were also present. Large bowls included the typical Late Roman wide-mouthed forms including examples with under-cut rims (BWM3). Jars included examples with everted rims, a collared rim vessel, a Dales type jar, lug-handled jars, and narrow necked types including examples with handles (Darling and Precious 2014, no. 968). Sherds from two lids were recognised. Beakers were rare and a funnel necked type with a grooved rim was the only recognisable form.

GREY5: Late Roman grey ware, wheel-thrown with dark surfaces. Dark grey/black fabric with abundant quartz, 0.3-1mm, sub-rounded or sub-angular some with low sphericity. A late 4th century to early 5th century AD date appears likely with this ware; this fabric was probably made in Lincolnshire. Sherds from this site included rims from a double lid-seated jar and from another lid-seated jar type.

GREY6: Late Roman grey ware, wheel-thrown with fine calcareous inclusions. Commonly with light grey surfaces and dark grey core, although some examples are fired to a dark grey throughout. A single body sherd was attributed to this fabric which was typically used for producing double lid-seated jars and dates to the 4th to early 5th century AD.

GREY8: Mid-grey fabric with sparse to moderate quartz inclusions, rare fine black inclusions and smooth surfaces sometimes with traces of burnishing. This fabric was identified amongst the Able UK AMEP2 assemblage, it was originally considered to possibly include Holme on Spalding Moor products. The range of forms appears similar to the GREYB fabric and it is possible that GREY8 represents a finer, Late Roman variant of the GREY1 fabric. It is hoped that more detailed scientific work will establish a production source for the sherds in this fabric group. A limited number of sherds in this fabric from Hatcliffe Top included a sherd from a wide-mouthed bowl and a bowl with a triangular rim.

GREYB: Local East Midlands burnished grey ware type. Mid-grey, hard high fired, wheel-made, burnished externally and internally on open vessels. Quartz moderate sub-rounded with some glassy grains, 0.1-0.8mm. Sparse ferrous inclusions occur, sub-rounded, 0.25-0.5mm. The majority of the sherds in this group were probably from a similar source to GREY1. A similar burnished fabric was seen by this author at the Stallingborough Old Fleet Drain site (Rowlandson 2011), in the collections of Immingham Museum (Immingham) and in the North Lincolnshire Museum collections from the Roman site at Kirmington. A small number of vessels in this fabric from Market Rasen have been seen by

this author. A local or near local Lincolnshire source is likely for the sherds from Hatcliffe Top as the fabric is similar to the common GREY1 fabric. Similar high fired and burnished grey wares have been found elsewhere in Lincolnshire and Yorkshire. In the East Midlands Todd had classified this as 'East Midlands burnished ware' (Todd 1968) although most of the examples he illustrated are similar to the products of the Swanpool industry which perhaps may be the source for much of that group. The sherds from Hatcliffe Top are much sandier than the distinctive high fired Holme on Spalding Moor fabric variant (see Tomber and Dore 1998) and should be considered as Lincoln or northern Lincolnshire products. A similar range of forms were recorded in the GREYB fabric as in the local unburnished grey wares (above) with the addition of examples of a flagon, a folded beaker, a handled bowl, carinated 'drinking bowls' (as Darling and Precious 2014, no. 1168), bowls with everted rims (BEV, Darling and Precious 2014, no. 1138), straight sided bowls with a flange and high beaded rim, and a further bowl type (B428, Darling 1999, fig. 41.533).

GREYC: Miscellaneous coarse grey wares. This fabric code has been used for the coarse quartz-gritted Late Roman sherds that could not be attributed to any of the existing fabric groups. The forms included double lid-seated jars, Dales type and other lid-seated jar types. The vessels from this site in this fabric group date to the 4th to early 5th century AD.

GROG: Miscellaneous grog-gritted wares. The few sherds attributed to this group are all from large jars or bowls with grey ware fabrics featuring additional grog or clay pellets.

GRRO: Coarse grey ware with 'Greensand quartz'. This is a more generic grey ware fabric 'group' with an unspecified matrix and quartz tempering but with the addition of rare to sparse polished Greensand Quartz 0.6-2mm (see discussion by Leary 2013 of similar wares from Mount Pleasant Nettleton/Rothwell). A source along the edge of the Lincolnshire Wold scarp is likely for all of these sherds and Linwood Warren may be one production source.

LCOA: Lincoln late coarse ware (Darling and Precious 2014). Typically used for double lid-seated jars and produced in the vicinity of Lincoln at the end of the Roman period. A small number of sherds from Hatcliffe Top appeared to be a good match to samples from Lincoln including a double lid-seated jar.

LCQU: Coarse quartz gritted, as GRRO with moderate to common rounded quartz 1-2mm. Forms typically included Huntcliff and double lid-seated

jars suggesting a Late Roman floruit for this fabric. Examples of this coarse fabric have been recognised amongst the material from Linwood Warren; it is probably a local example of the Late Roman coarse quartz-gritted ware tradition (e.g. LCOA). Only a few body sherds from Hatcliffe Top were attributed to this fabric.

ROXGR: Roxby grey ware. Only one sherd from the site appeared to be a good match with the typical Roxby kiln fabric. This is unsurprising given that the Roxby fabric appeared to mostly be produced in the 2nd century AD and the kiln site was located further away than a number of other local kilns. Leary also found little evidence of these wares reaching Mount Pleasant, (2013).

SFGR: South Ferriby grey ware. Only four sherds appeared to be a good match for samples from the South Ferriby kiln. Leary found little evidence of these wares reaching the Mount Pleasant site (2013).

A clear pattern is evident from the range of pottery types from this excavation: there was an abundance of local plain and burnished grey wares dating to the 3rd to 4th century AD and little material that was diagnostic of the 2nd century AD. The presence of in-turned bead and flanged bowls and double lid-seated jars (including examples in typical coarse gritted local fabrics) suggests that activity continued on the site until the end of the 4th century AD. The range of forms present is typical of those seen on the Late Roman Able UK AMEP2 site (Rowlandson *et al.* 2017). It should be noted that many of the grey ware forms given a broadly Late Roman date, such as the straight sided bead and flanged bowls, wide-mouthed bowls with under-cut rims (BWM3) and plain rimmed dishes, probably continued to be made until the very end of Roman pottery production. As stylistic changes stagnated in the Late Roman period we require instances of the unusual 'new' forms that occurred around then to attribute a context to the very end of the Roman period (Gerrard 2013; 2014; 2016). In reality much of the pottery labelled broadly late 3rd to 4th century AD from Hatcliffe Top may have been produced at the very end of this date range.

The majority of sherds presented for study from the fieldwalking in Corner Field consisted of reduced wares. The local grey wares (GREY, GREY2 and GREY4) seen were predominantly of Late Roman form types including bowls with in-turned bead and flanged rims (BIBF), plain rimmed dishes (DPR), Dales type jars (JDW), necked jars, large lipped bowls, developed wide-mouthed bowls, straight sided bead

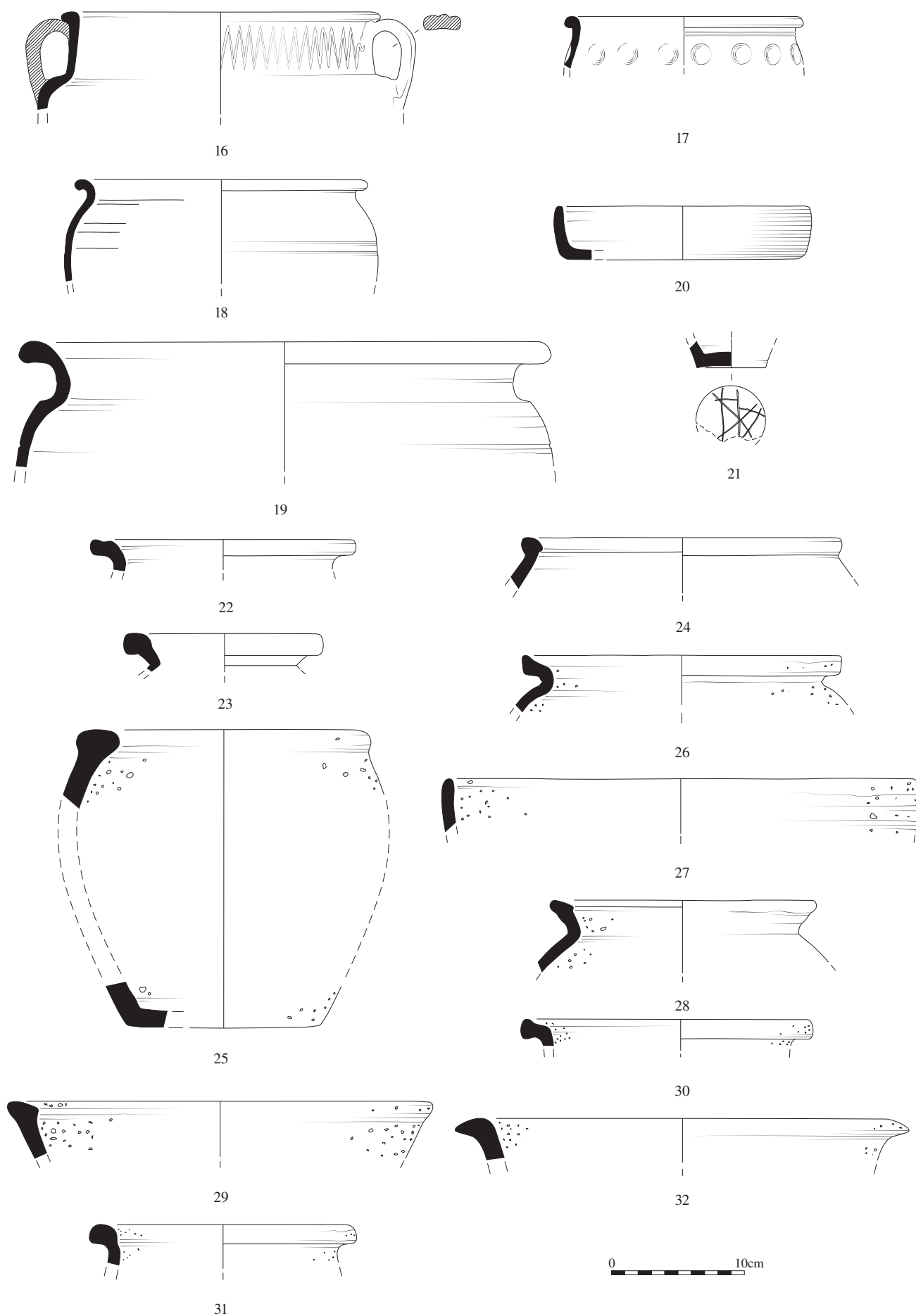


Fig. 6.3 Hatcliffe Top Roman pottery (Nos 16-32).

and flanged bowls (BFB), and a Late Roman bowl with an everted rim (BEV, cf. Darling and Precious 2014, no. 1138). The burnished grey ware GREYB fabric was well represented including a typical straight sided bead and flanged bowl, a lipped bowl, wide-mouthed bowls, a plain rimmed dish, jars with everted rims and a large jar. A small quantity of the coarse, quartz-gritted GRRO fabric, including lid-seated jars (Fig. 6.3 No. 23) and lids of Late Roman date, and sherds of the LCQU fabric were also present.

Illustrated vessels:

- Fig. 6.1 No. 8. GREY1: a variant on a flanged bowl. Trench C, trench Phase 4, Ditch [3718], fill (3707), D15.
- Fig. 6.1 No. 9. GREY1: a straight-sided bead and flanged bowl. Trench C, trench Phase 2, Trackway and Surface [3504], fill (3502), D17.
- Fig. 6.1 No. 10. GREY1: A large lipped bowl; broadly similar vessels have been illustrated from the late Roman kiln at Rookery Lane (Webster 1960, fig. 3.28-30). Trench C, trench Phase 2, Post Setting [3025], fill (3024), D12.
- Fig. 6.1 No. 11. GREY1: A grey ware bowl with an in-turned bead and flanged rim. Trench C medieval Furrow [3720], fill (3713), D21.
- Fig. 6.1 No. 12. GREY1: A large wide-mouthed bowl. Trench C, trench Phase 2, Trackway and Surface [3504], fills (3500) and (3550), D19.
- Fig. 6.1 No. 13. GREY1: A lug-handled jar with burnished wavy line decoration. Trench D, Modern ploughsoil within trench, Layer (4000).
- Fig. 6.1 No. 14. GREYB: A burnished grey ware flagon; broadly similar vessels are published from the Swanpool kilns (Webster and Booth 1947, fig. 3 B1-2). Trench A, trench Phase 1B, Layer (1039), D05.
- Fig. 6.1 No. 15. GREYB: A straight-sided bowl with a bead and flanged rim and burnished wavy line decoration. Trench C, trench Phase 2, Trackway Surface [3504], fills (3500) and (3550).
- Fig. 6.3 No. 16. GREYB: A handled bowl with burnished line decoration on the neck; similar vessels occur at Lincoln (Darling and Precious 2014, no. 1163) and Dragonby (Gregory 1996, fig. 20.23.1263). Trench D, trench Phase 3, Gully [4079], fill (4016), D30.
- Fig. 6.3 No. 17. GREYB: A 'Romano-Saxon' type bowl with pushed in dimple decoration. As discussed above examples of this type of vessel are rare and mostly found in 'Final Roman' assemblages. Trench A, Modern ploughsoil within trench, Layer (1001).
- Fig. 6.3 No. 18. GREYB: A wide-mouthed bowl. Trench C, trench Phase 3, Gully [3719], fill (3711), D26.

Fig. 6.3 No. 19. GREYB: A wide-mouthed bowl with an under-cut rim. Trench D, trench Phase 3, Gully [4079], fill (4016), D31.

Fig. 6.3 No. 20. GREYB: A dish with a plain rim. Trench C, trench Phase 2, Trackway and Surface [3017], fill (3016), D13.

Fig. 6.3 No. 21. GREYB: A grey ware string cut base with burnished line decoration. Trench A, Modern ploughsoil within trench, Layer (1001), D02.

Fig. 6.3 No. 22. GREYC: A coarse grey ware jar, probably a late Roman lid-seated type. Modern ploughsoil, Corner Field, Layer (3715), D08.

Fig. 6.3 No. 23. GRRO: A late Roman jar in a coarse quartz-gritted fabric; similar jars were produced at Linwood Warren (Samuels 1983). Fieldwalking find HT505, D01.

Prehistoric or Native tradition wares

ETW/ETW2: Handmade rock-gritted wares. Quartz and non-soluble rock-gritted sherds most probably manufactured using fractured erratic rocks from the Boulder clay deposits that occur around and to the east of the site. The majority of the handmade sherds from this site were considered Saxon (Section 6.2), but four body sherds were considered to be Iron Age or Roman. Rock-gritted wares of this type are common from the Late Bronze Age until the early Roman period in north eastern Lincolnshire (Knight 1994; Rowlandson 2012c; Rowlandson and Fiske 2016; Rowlandson *et al.* 2017). The handmade rock-gritted potting tradition appears to go into decline in this area during the 1st century AD when shell-gritted wares and subsequently Roman grey wares became common. Examples of handmade sherds are typically rare on Late Roman sites with sherds from only two vessels found on the almost exclusively Late Roman Old Fleet Drain site, Stallingborough (Rowlandson 2011). This is in contrast to assemblages from York and eastern Yorkshire where the handmade tradition continued, particularly in rural areas, throughout the Roman period (Rowlandson 2012b; Monaghan 1997). Given that similar rock-gritted wares were made using Boulder clay deposits in eastern Yorkshire it would not be possible to ascertain which side of the River Humber they were made, while closely dating the pottery in this tradition has proven to be challenging (Cumberpatch 2016) especially in the absence of any feature sherds, as in this case.

IAGR: Miscellaneous Native tradition gritty wares (Darling and Precious 2014).

IAGR1: Native tradition grog/clay pellet-gritted ware. Most vessels were handmade with some wheel-

finishing of rims. Mostly with dark brown or dark grey surfaces, some vessels have a patchy firing and also have mid-brown patches. Common dark grey grog/?mudstone up to 3mm; quartz moderate to common, sub-rounded, with some glassy grains 0.2-0.8mm; ferrous inclusions are sparse and sub-rounded, 0.25-0.5mm; rare voids up to 3mm are perhaps leached out calcareous inclusions.

IAGR2: Native tradition shell-gritted and grog/clay pellet-gritted ware. Sherds mostly appear wheel-finished or wheel-made with some handmade. Moderate grey angular ?grog/mudstone up to 3mm; quartz moderate to common, sub-rounded with some glassy grains, 0.2-0.8mm; ferrous inclusions sparse, sub-rounded, 0.25-0.5mm; moderate to sparse calcareous inclusions (probably fossil shell) up to 3mm; some sherds have rare, angular grey flint, up to 2.5mm; no mica evident. (Previously named SHGR by this author (IR) in reports on pottery from North Lincolnshire).

IAGR3: Native tradition coarse quartz-gritted. Sherds mostly appear wheel-finished with some being handmade. Mid-green-grey, occasionally with dark grey core; common large quartz glassy/translucent inclusions, sub-rounded with low sphericity between 1-3mm; further quartz moderate to common sub-rounded with some glassy grains, 0.2-0.8mm. Some vessels have sparse grey angular ?grog/mudstone up to 3mm. Ferrous inclusions sparse, sub-rounded, 0.25-0.5mm, or moderate to sparse calcareous inclusions (probably fossil shell) up to 3mm. Some sherds have rare, angular grey flint up to 2.5mm. No mica evident. Examples of Roxby Type A jars (Rigby and Stead 1976) and other lid-seated jars were often made in this fabric and it should perhaps be seen as a coarse gritted ware more common in the 2nd century AD.

IAGR4: Native tradition grog/clay pellet-gritted ware. Mid- to dark grey surfaces often with oxidised (orange margins); common to abundant sub-rounded and angular quartz 0.2-0.5mm; moderate to common grog/clay pellets 0.5-1mm; no mica evident. The range of forms in this fabric are typically wedge shaped rim, native tradition, large bowls or jars, and jars with hooked everted rims.

Vessels of this type range appeared in the 1st century AD and continued to be produced in Lincolnshire into the 2nd century AD. Whilst such wares appear to have fallen out of favour in the City of Lincoln during the middle of the 2nd century AD (Darling and Precious 2014; Leary 2013), in more rural areas it is possible that this fabric class continued to be produced throughout the 2nd century prior to the development

of the shell-gritted Dales ware industry. The range of forms included jars and large bowls with wedge shaped rims (CPN and BNAT, see Fig. 6.3 Nos 24-5) and jars with everted rims or hooked everted rims (broadly as Rigby and Stead 1976, fig. 64.4), with the more developed IAGR3 fabric being used to make lid-seated jars (e.g. Fig. 6.3 No. 26) including Roxby 'A' type vessels (Rigby and Stead 1976, fig. 65. 1-6). The low proportion of vessels in these fabrics from Hatcliffe Top would suggest limited activity on the site during the 1st and 2nd century AD. During the 3rd century AD such wares appear to have been replaced by the prolific output of the Dales ware industries.

IASH1: Iron Age shell-gritted coarse ware. A single small handmade sherd with a triangular everted rim from context (4003) was tentatively attributed to this group. Shell-gritted Iron Age wares were common in this area during the 1st century AD but there was limited evidence for wares of this type on this site.

QUCF/CPSM: Handmade prehistoric fabric. Quartz common and fine; clay pellets sparse to moderate. A single handmade sherd, possibly of earlier prehistoric date with an oxidised external surface and black core was recorded from a fill in Ditch [5003], Trench E. The sherd was undoubtedly residual in this context.

There were a few native tradition ware finds amongst the group from the fieldwalking, including small quantities of the IAGR, IAGR2 and IASH1 fabrics. These wares are usually more susceptible to plough damage than grey ware so it is not surprising that only a limited number were presented for study.

Illustrated vessels:

Fig. 6.3 No.24. IAGR1: A native tradition jar. Trench E, trench Phase 2, Ditch [5003], fill (5001), D07.

Fig. 6.3 No. 25. IAGR2: A large native tradition jar or bowl. Trench C, trench Phase 2, Post setting [3761], fill (3742), D23.

Fig. 6.3 No. 26. IAGR3: A large wheel-made lid-seated jar. Trench C, Modern ploughsoil within trench, Layer (3700), D14.

Calcareous gritted later Roman wares

CALG: Calcite-gritted wares. Mostly chalk-gritted with no obvious sparry mineral calcite crystals present. The sherds from this site were probably from eastern Yorkshire and were Huntcliff or 'proto-Huntcliff' type forms.

CALGS: Calcite-gritted with recognisable sparry mineral calcite. Probably produced in north eastern Yorkshire and were of the Huntcliff or 'proto-

Huntcliff' tradition. An example of a jar with a curved rim was retrieved from ploughsoil/topsoil at Trench C (3003) (broadly as Gillam 1970, Type 161) and true Huntcliff jars were recorded from the fieldwalking in Corner Field. The occurrence of these vessels would fit with the small quantities of such wares recognised from other late Roman sites in north eastern Lincolnshire (Didsbury *nd*; Rowlandson and Fiske 2016; Rowlandson *et al.* 2017).

DWSHT: Dales ware shell-gritted type (Tomber and Dore 1998, DAL SH). This fabric code has been used to separate out the hand-built wheel-finished Dales ware typically seen in north western Lincolnshire, and the extremely similar material seen in Lincoln, from the wheel-made late Roman shell-gritted wares used to make double lid-seated jars (Darling and Precious 2014, DWSH). The sherds from Hatcliffe Top appear very similar to material from the Scunthorpe area although it has also been noted that there were probably other sources making shell-gritted wares using the same manufacturing technique (Vince 2006; Leary 2013). Dales ware has been greatly discussed as it is one of the key dating indicators in Lincolnshire and the north (Darling and Precious 2014; Leary 2013; Darling 2009; Swan 2002). It appears likely that it reached this site sometime in the 3rd century AD and continued to be used into the 4th century AD. Lid-seated jars were the main forms (Fig. 6.3 Nos 28-9) although examples of dishes were also present (Fig. 6.3 No. 27), as in fact often seen amongst assemblages from northern Lincolnshire (Rigby and Stead 1976; Gregory 1996; Darling 2009). Dales ware was well represented in the whole assemblage and is discussed further below.

LROL: Late Roman oolith-gritted ware. A late Roman wheel-made fabric seen by this author (IR) in groups from Sleaford and Lincoln and used for double lid-seated jars. Vessels in the similar Dales ware tradition with oolith grits (DWOOL) have been recorded from the Able UK AMEP2 site and from Melton, East Yorkshire. Further examples of oolith-gritted Iron Age vessels have been published from Melton, East Yorkshire (Didsbury and Vince 2011). It is likely that such wares were produced in more than one location in Lincolnshire and eastern Yorkshire but represent the use of calcareous Jurassic ooliths as temper for producing vessels in the same way that potters utilised fossil shell.

SHEL: Other shell-gritted wares. This code has been used to group together all the late Roman wheel-made shell-gritted wares. Examples of fully wheel-made

pottery including double lid-seated jars and bowls and dishes appear in assemblages from Lincoln towards the end of the 4th century AD and largely replaced the Dales ware tradition shell-gritted lid-seated jars. The vessels from Hatcliffe Top included double lid-seated jars and Huntcliff type lid-seated jars, bowls and dishes. The double lid-seated jar form, also made in the late coarse quartz-gritted fabrics equating to Swanpool form H (Webster and Booth 1947) is a key chronological indicator and at least six examples were recorded from this site. The copies of the Huntcliff jar represent potters mimicking this key lid-seated form manufactured in north eastern Yorkshire. Whilst it is possible that these vessels may have been made by potters using Jurassic deposits to the west of the Yorkshire Wolds, production in north western Lincolnshire would be more likely.

Finds from the fieldwalking in Corner Field in this class included rims from two Huntcliff jars (Gillam 1970, Type 163) in a sparry mineral calcite-gritted fabric. These suggest activity in the late 4th to early 5th century AD. Shell-gritted Dales ware jars, predominantly the typical lid-seated forms (Gillam 1970, Type 157) with handmade bodies and wheel-finished rims, were present and were of similar types to those found through the excavations. Late Roman wheel-made shell-gritted jars (SHEL) were also recovered including a necked type. It should be noted that there were only a limited number of shell-gritted sherds in this group but they are more prone to plough damage and frosts than the well fired grey wares so it is difficult to contrast the collection from fieldwalking surveys directly with the excavated material.

Illustrated vessels:

Fig. 6.3 No. 27. DWSHT: A plain rimmed dish in a Dales ware fabric. Trench B, trench Phase 1, Gully [2030], fill (2029) and Modern topsoil/ploughsoil within trench, Layer (2026), D06.

Fig. 6.3 No. 28. DWSHT: A Dales ware jar. Trench C, trench Phase 2, Post Setting [3025], fill (3024), D11.

Fig. 6.3 No. 29. DWSHT: A Dales ware jar. Trench C, trench Phase 1, Oven [3050], fill (3041) and Modern topsoil/ploughsoil within trench, Layer (3003), D09.

Fig. 6.3 No. 30. SHEL: A wheel-made double lid-seated jar. Trench D, Modern ploughsoil with trench, Layer (4000), D39.

Fig. 6.3 No. 31. SHEL: A shell-gritted Huntcliff jar. Trench D, Modern ploughsoil within trench, Layer (4000), D28.

Fig. 6.3 No. 32. CALGS: A large jar or bowl with a sparry mineral calcite-gritted fabric. Trench D, trench Phase 3, Layer (4002), D25.

Table 6.1 Hatcliffe Top: Summary of the main pottery fabrics from the excavation trenches

Fabric code	Category	Fabric details	No. of Sherds	Sherd %	Weight (g)	Weight %	Total RE %
MOMD	Mortaria	Midlands mortaria; precise source unknown	1	0.03%	3	0.01%	0
MONVT	Mortaria	Nene Valley type- light fabric, slag trituration grits	1	0.03%	9	0.03%	6
MOSPT	Mortaria	Swanpool type	13	0.42%	258	0.79%	19
CGBL	Import	Central Gaulish Black ware	1	0.03%	1	0.00%	0
GFIN	Fine	Miscellaneous fine grey wares	57	1.85%	307	0.94%	82
GFIN?	Fine	Miscellaneous fine grey wares	1	0.03%	1	0.00%	0
PART	Fine	Parisian type wares	1	0.03%	3	0.01%	0
CC	Fine	Other colour-coated wares	1	0.03%	2	0.01%	0
CC?	Fine	Other colour-coated wares	1	0.03%	1	0.00%	0
CC1	Fine	Colour coated fabric 1	54	1.75%	350	1.07%	30
CC2	Fine	Dark colour-coat and red fabric- Late Roman fabric	5	0.16%	7	0.02%	0
CC3	Fine	Colour-coated with a pale orange fabric	6	0.19%	27	0.08%	8
MHAD?	Fine	Much Hadham wares	1	0.03%	4	0.01%	0
MRPART	Fine	Market Rasen Parisian ware	2	0.06%	5	0.02%	6
OXRC	Fine	Oxfordshire red colour-coated	1	0.03%	1	0.00%	0
SPCCT	Fine	Swanpool colour-coated type	4	0.13%	32	0.10%	0
SPOXT	Oxidised	Swanpool type oxidized wares	77	2.50%	825	2.52%	99
CR	Oxidised	Roman cream wares (various)	3	0.10%	22	0.07%	0
CRPA	Oxidised	Crambeck parchment ware	1	0.03%	110	0.34%	24
OX	Oxidised	Misc. oxidized wares	20	0.65%	73	0.22%	2
OX?	Oxidised	Misc. oxidised wares	14	0.45%	58	0.18%	2
OXB	Oxidised	Late Roman burnished- oxidised	4	0.13%	188	0.58%	17
OXC	Oxidised	Coarse oxidised	1	0.03%	24	0.07%	0
SPOX	Oxidised	Swanpool oxidized wares	1	0.03%	5	0.02%	0
BB1	Reduced	Black burnished 1, unspecified	4	0.13%	58	0.18%	11
BB1?	Reduced	Black burnished 1, unspecified	2	0.06%	14	0.04%	0
BB2	Reduced	Black burnished 2	1	0.03%	16	0.05%	0
BBT	Reduced	Black Burnished type copies	1	0.03%	12	0.04%	0
GREY	Reduced	Miscellaneous grey wares	512	16.64%	4645	14.22%	358
GREY?	Reduced	Miscellaneous grey wares	19	0.62%	126	0.39%	6
GREY1	Reduced	Reduced fabric 1	343	11.15%	3527	10.79%	376
GREY2	Reduced	Reduced fabric 2	3	0.10%	30	0.09%	0
GREY3	Reduced	Reduced fabric 3	34	1.10%	307	0.94%	30
GREY4	Reduced	Reduced fabric 4	4	0.13%	33	0.10%	2
GREY5	Reduced	Reduced fabric 5	3	0.10%	29	0.09%	14

Table 6.1 Hatcliffe Top: Summary of the main pottery fabrics from the excavation trenches (continued).

Fabric code	Category	Fabric details	No. of Sherds	Sherd %	Weight (g)	Weight %	Total RE %
GREY6	Reduced	Reduced fabric 6	1	0.03%	5	0.02%	0
GREY8	Reduced	Reduced fabric 8	62	2.01%	639	1.96%	2
GREYB	Reduced	High fired late Roman grey wares	696	22.62%	10382	31.77%	780
GREYC	Reduced	Coarse Grey ware	55	1.79%	426	1.30%	38
GROG	Reduced	Grog-tempered wares	10	0.32%	161	0.49%	0
GRRO	Reduced	Grey ware with Greensand Quartz	27	0.88%	218	0.67%	12
IAGR	Reduced	Native tradition/transitional grit-tempered wares	19	0.62%	146	0.45%	2
IAGR?	Reduced	Native tradition/transitional grit-tempered wares	9	0.29%	132	0.40%	0
IAGR1	Reduced	Iron Age tradition 'Gritty': Site fabric 1	2	0.06%	28	0.09%	5
IAGR2	Reduced	Iron Age tradition 'Gritty': Site fabric 2	18	0.58%	357	1.09%	8
IAGR3	Reduced	Iron Age tradition 'Gritty': Site fabric 3	3	0.10%	125	0.38%	22
IAGR4	Reduced	Iron Age tradition 'Gritty': Site fabric 4	7	0.23%	285	0.87%	0
LCOA	Reduced	Late coarse pebbly fabric; double lid-seated jars	1	0.03%	18	0.06%	0
LCOA?	Reduced	Late coarse Lincoln fabric?	16	0.52%	136	0.42%	6
LCQU	Reduced	Late Roman coarse quartz gritted	4	0.13%	88	0.27%	7
ROXGR	Reduced	Roxby grey ware	1	0.03%	32	0.10%	0
SFGR	Reduced	South Ferriby Grey ware	4	0.13%	33	0.10%	0
CALG	Calcareous	Calcite tempered	6	0.19%	50	0.15%	0
CALGS	Calcareous	Sparry calcite gritted	5	0.16%	116	0.36%	11
DWSHT	Calcareous	Dales ware type	512	16.64%	4894	14.98%	286
DWSHT?	Calcareous	Dales ware type	11	0.36%	219	0.67%	0
IASH1	Calcareous	Iron Age Shell Gritted: Site fabric 1	1	0.03%	10	0.03%	7
LROL	Calcareous	Late Roman oolitic gritted fabric	3	0.10%	15	0.05%	0
SHEL	Calcareous	Miscellaneous undifferentiated shell-tempered	184	5.98%	1591	4.87%	75
VESIC	Shell?	Vesicular fabric	1	0.03%	1	0.00%	0
ETW	Rock temper	Erratic pebbles broken up as temper	2	0.06%	3	0.01%	0
ETW2	Rock temper	Erratic pebbles broken up as temper	2	0.06%	14	0.04%	0
QUCF/CPSM	Quartz	Quartz common fine/Clay pellets sparse medium	2	0.06%	5	0.02%	0
MISC	Misc.	Misc. uncategorised	22	0.71%	56	0.17%	4
PRO	Post Roman	Post-Roman Pottery	193	6.27%	1375	4.21%	84
FCLAY?	Fired Clay	Fired Clay	1	0.03%	2	0.01%	0

Table 6.2 Hatcliffe Top: Summary of the main pottery forms from the excavation trenches.

Form	Form Type	Form Description	No. of Sherds	Sherd %	Weight (g)	Weight %	Total RE %
BK	Beaker	Unclassified form	35	1.14%	103	0.32%	0
BK?	Beaker	Unclassified form	8	0.26%	15	0.05%	6
BK110	Beaker	Parisian (Elsdon 1982 Form 2; Darling and Precious 2014, nos 257-9)	2	0.06%	5	0.02%	6
BKCOR	Beaker	Cornice rim	1	0.03%	14	0.04%	14
BKEV	Beaker	Everted rim	4	0.13%	19	0.06%	41
BKFG	Beaker	Funnel necked grooved-rimmed	2	0.06%	5	0.02%	17
BKFN	Beaker	Funnel necked; form unknown	1	0.03%	2	0.01%	1
BKFO	Beaker	Folded; indeterminate type	6	0.19%	41	0.13%	0
BKRC	Beaker	Roughcast	2	0.06%	4	0.01%	0
BKROU	Beaker	Rouletted	1	0.03%	1	0.00%	0
BKSF	Beaker	Slit-Folded	1	0.03%	2	0.01%	0
B	Bowl	Unclassified form	18	0.58%	299	0.92%	41
B?	Bowl	Unclassified form	2	0.06%	13	0.04%	6
B31	Bowl	Imitation of samian form Drag. 31	1	0.03%	49	0.15%	12
B38	Bowl	Imitation of samian form Drag. 38	18	0.58%	375	1.15%	29
B428	Bowl	As Darling 1999, fig. 41.533	1	0.03%	11	0.03%	3
BCAR	Bowl	Carinated	22	0.71%	147	0.45%	34
BEV	Bowl	Everted rim	3	0.10%	51	0.16%	23
BFB	Bowl	Bead and flange bowl	15	0.49%	347	1.06%	92
BFBH	Bowl	Bead and flange high bead	5	0.16%	486	1.49%	41
BFL	Bowl	Flange rimmed (e.g. Gillam Types 218-220)	18	0.58%	317	0.97%	105
BG225	Bowl	Rounded as Gillam Type 225	2	0.06%	33	0.10%	6
BGF	Bowl	Grooved flange	1	0.03%	16	0.05%	6
BGR	Bowl	With grooved rim	1	0.03%	11	0.03%	4
BHA	Bowl	Handled bowl	3	0.10%	196	0.60%	19
BHEM	Bowl	Hemispherical	1	0.03%	28	0.09%	4
BIBF	Bowl	In turned bead and flange as Swanpool D13-23	5	0.16%	209	0.64%	30
BPR	Bowl	Plain rimmed	6	0.19%	174	0.53%	45
BRS	Bowl	Romano-Saxon type; dimpled; slashed	1	0.03%	21	0.06%	9
BTR	Bowl	Triangular rimmed (e.g. Gillam Types 222-3)	10	0.32%	325	0.99%	76
BFLL	Bowl - large	Flange rimmed	2	0.06%	120	0.37%	23
BL	Bowl - large	Large	11	0.36%	438	1.34%	0
BNAT	Bowl - large	Native tradition bowl e.g. Darling and Precious 2014, no.700	2	0.06%	213	0.65%	6
BWM	Bowl - large	Wide-mouthed; Darling and Precious 2014, nos 1225-30	25	0.81%	521	1.59%	42
BWM1	Bowl - large	Wide-mouthed; Darling and Precious 2014, nos 1225-7	4	0.13%	127	0.39%	20
BWM2	Bowl - large	Wide-mouthed; Darling and Precious 2014, no. 1228	1	0.03%	36	0.11%	12
BWM3	Bowl - large	Wide-mouthed; Darling and Precious 2014, nos 1229-30	12	0.39%	770	2.36%	52
BD	Bowl/dish	-	54	1.75%	992	3.04%	19
BDTR	Bowl/dish	Triangular rim (e.g. Gillam Types 222-3)	1	0.03%	3	0.01%	2
CLSD	Closed	Form	182	5.91%	2792	8.54%	0
D	Dish	Unclassified form	4	0.13%	77	0.24%	8

Table 6.2 Hatcliffe Top: Summary of the main pottery forms from the excavation trenches (continued).

Form	Form Type	Form Description	No. of Sherds	Sherd %	Weight (g)	Weight %	Total RE %
DGR	Dish	Grooved rim	2	0.06%	25	0.08%	14
DPR	Dish	Plain rim	20	0.65%	367	1.12%	111
F	Flagon	Unclassified form	7	0.23%	44	0.13%	72
FJ	Flagon/jar	Unclassified form	3	0.10%	26	0.08%	0
CPN	Jar	Native tradition	3	0.10%	44	0.13%	7
J	Jar	Unclassified form	71	2.31%	951	2.91%	83
J?	Jar	Unclassified form	5	0.16%	31	0.09%	21
J162	Jar	Narrow necked; as Darling and Precious 2014, no. 968	3	0.10%	56	0.17%	25
JCR	Jar	Collared rim as Swanpool type, Webster and Booth 1947, C40-1	3	0.10%	83	0.25%	33
JCUR	Jar	Curved	1	0.03%	10	0.03%	4
JDLS	Jar	Double lid-seated	17	0.55%	211	0.65%	60
JDLS?	Jar	Double lid-seated	1	0.03%	52	0.16%	11
JDW1	Jar	Dales ware, as Gillam Type 157	43	1.40%	601	1.84%	180
JDW2	Jar	Dales ware, as Monaghan 1997 JD2 form	10	0.32%	326	1.00%	64
JEV	Jar	Everted rim	13	0.42%	157	0.48%	107
JEVC	Jar	Everted rim- curved as Gillam Type 135	1	0.03%	22	0.07%	4
JHUN	Jar	Huntcliff	2	0.06%	65	0.20%	12
JIR	Jar	Inturned rim	3	0.10%	30	0.09%	9
JL	Jar	Large	28	0.91%	1483	4.54%	26
JLH	Jar	Lug-handled	3	0.10%	62	0.19%	25
JLH?	Jar	Lug-handled	1	0.03%	6	0.02%	0
JLS	Jar	Lid-seated	11	0.36%	218	0.67%	63
JNK	Jar	Necked	14	0.45%	152	0.47%	54
JNN	Jar	Narrow-necked	4	0.13%	118	0.36%	60
JS	Jar	Storage	2	0.06%	190	0.58%	0
JBK	Jar/Beaker	Small jar or beaker	2	0.06%	7	0.02%	0
JBKEV	Jar/Beaker	Everted rim	7	0.23%	37	0.11%	62
JBKNK	Jar/Beaker	Necked	3	0.10%	15	0.05%	26
JB	Jar/Bowl	Unclassified form	71	2.31%	798	2.44%	182
JBEV	Jar/Bowl	Everted rim	3	0.10%	29	0.09%	10
JBL	Jar/Bowl	Large	84	2.73%	3100	9.49%	97
JBNK	Jar/Bowl	Necked	9	0.29%	103	0.32%	37
L	Lid	Unclassified form	2	0.06%	44	0.13%	11
LBIF	Lid	Bifurcated rim	1	0.03%	7	0.02%	2
LD	Lid/dish	Unclassified	4	0.13%	30	0.09%	24
CHP	Misc	Cheese press	3	0.10%	67	0.21%	0
COL	Misc	Colander	1	0.03%	20	0.06%	0
ST	Misc	Strainer	3	0.10%	53	0.16%	0
M	Mortaria	Unclassified Form	9	0.29%	158	0.48%	0
MHH	Mortaria	Hammerheads as Gillam Types 279-84	2	0.06%	41	0.13%	7
MRR	Mortaria	Reeded rim	2	0.06%	15	0.05%	8
MTR	Mortaria	Triangular rim	1	0.03%	43	0.13%	8
MWS	Mortaria	Wall-sided as Gillam Types 287-9	1	0.03%	13	0.04%	2
OPEN	Open	Form	8	0.26%	134	0.41%	0
P	Plate	Form	1	0.03%	110	0.34%	24
-	Unknown	Form uncertain	2095	68.09%	13113	40.13%	42

Table 6.3 Hatcliffe Top: Summary of the main pottery fabrics from the fieldwalking surveys.

Fabric code	Category	Fabric details	No. of Sherds	Sherd %	Weight (g)	Weight %	Total RE %
GFIN	Fine	Miscellaneous fine grey wares	3	2.17%	24	0.89%	10
GREY	Reduced	Miscellaneous grey wares	49	35.51%	934	34.46%	136
GREY2	Reduced	Reduced fabric 2	1	0.72%	32	1.18%	0
GREY4	Reduced	Reduced fabric 4	13	9.42%	395	14.58%	37
GREYB	Reduced	High fired late Roman grey wares	31	22.46%	777	28.67%	121
GRRO	Reduced	Grey ware with Greensand quartz	10	7.25%	203	7.49%	33
IAGR	Reduced	Native tradition/transitional grit-tempered wares	1	0.72%	16	0.59%	0
IAGR2	Reduced	Iron Age tradition 'Gritty': Site fabric 2	1	0.72%	24	0.89%	6
LCQU	Reduced	Late Roman coarse quartz gritted	2	1.45%	34	1.25%	0
CALGS	Calcareous	Sparry calcite gritted	2	1.45%	19	0.70%	9
DWNEl	Calcareous	Dales ware - North East Lincolnshire	7	5.07%	78	2.88%	27
DWSHT	Calcareous	Dales ware type	5	3.62%	55	2.03%	17
IASH1	Calcareous	Iron Age Shell Gritted: Site fabric 1	2	1.45%	13	0.48%	4
SHEL	Calcareous	Miscellaneous undifferentiated shell-tempered	6	4.35%	66	2.44%	9
PRO	Post Roman	Post-Roman Pottery	5	3.62%	40	1.48%	19

Table 6.4 Hatcliffe Top: Summary of the main pottery forms from the fieldwalking surveys.

Form	Form Type	Form Description	No. of Sherds	Sherd %	Weight (g)	Weight %	Total RE %
BKEV	Beaker	Everted rim	1	0.72%	7	0.26%	18
BKNK	Beaker	Necked	1	0.72%	8	0.30%	10
B428	Bowl	As Darling, 1999 fig. 41.533	1	0.72%	10	0.37%	6
BEV	Bowl	Everted rim	1	0.72%	32	1.18%	12
BFB	Bowl	Bead and flange bowl	3	2.17%	82	3.03%	18
BFL	Bowl	Flange rimmed (e.g. Gillam Types 218-220)	3	2.17%	52	1.92%	19
BIBF	Bowl	In-turned bead and flange, Swanpool D13-23	6	4.35%	112	4.13%	16
BTR	Bowl	Triangular rimmed (e.g. Gillam Types 222-3)	1	0.72%	10	0.37%	2
BFLl	Bowl - large	Flange rimmed	3	2.17%	89	3.28%	11
BL	Bowl - large	Large	3	2.17%	188	6.94%	0
BWM	Bowl - large	Wide-mouthed; Darling and Precious 2014, nos 1225-30	1	0.72%	32	1.18%	6
BWM3	Bowl - large	Wide-mouthed; Darling and Precious 2014, nos 1229-30	3	2.17%	88	3.25%	16
BD	Bowl/dish	-	21	15.22%	550	20.30%	2
CLSD	Closed	Form	8	5.80%	226	8.34%	0
D	Dish	Unclassified form	1	0.72%	16	0.59%	7
DPR	Dish	Plain rim	3	2.17%	36	1.33%	16
CPN	Jar	Native tradition	1	0.72%	24	0.89%	6
J	Jar	Unclassified form	11	7.97%	99	3.65%	40
JDW	Jar	Dales ware	3	2.17%	23	0.85%	16
JDW1	Jar	Dales ware, as Gillam Type 157	5	3.62%	55	2.03%	17
JEV	Jar	Everted rim	2	1.45%	41	1.51%	17
JHUN	Jar	Huntcliff	2	1.45%	19	0.70%	9
JIR	Jar	In-turned rim	1	0.72%	7	0.26%	2
JL	Jar	Large	2	1.45%	36	1.33%	14
JLS	Jar	Lid-seated	5	3.62%	92	3.39%	24
JNK	Jar	Necked	3	2.17%	56	2.07%	22
JBK	Jar/Beaker	Small jar or beaker	2	1.45%	17	0.63%	4
JBKNK	Jar/Beaker	Necked	1	0.72%	5	0.18%	11
JB	Jar/Bowl	Unclassified form	11	7.97%	109	4.02%	32
JBL	Jar/Bowl	Large	7	5.07%	335	12.36%	27
JBNK	Jar/Bowl	Necked	3	2.17%	17	0.63%	9
L	Lid	Unclassified form	1	0.72%	31	1.14%	7
LD	Lid/dish	Unclassified	1	0.72%	3	0.11%	2
-	Unknown	Form uncertain	17	12.32%	203	7.49%	10

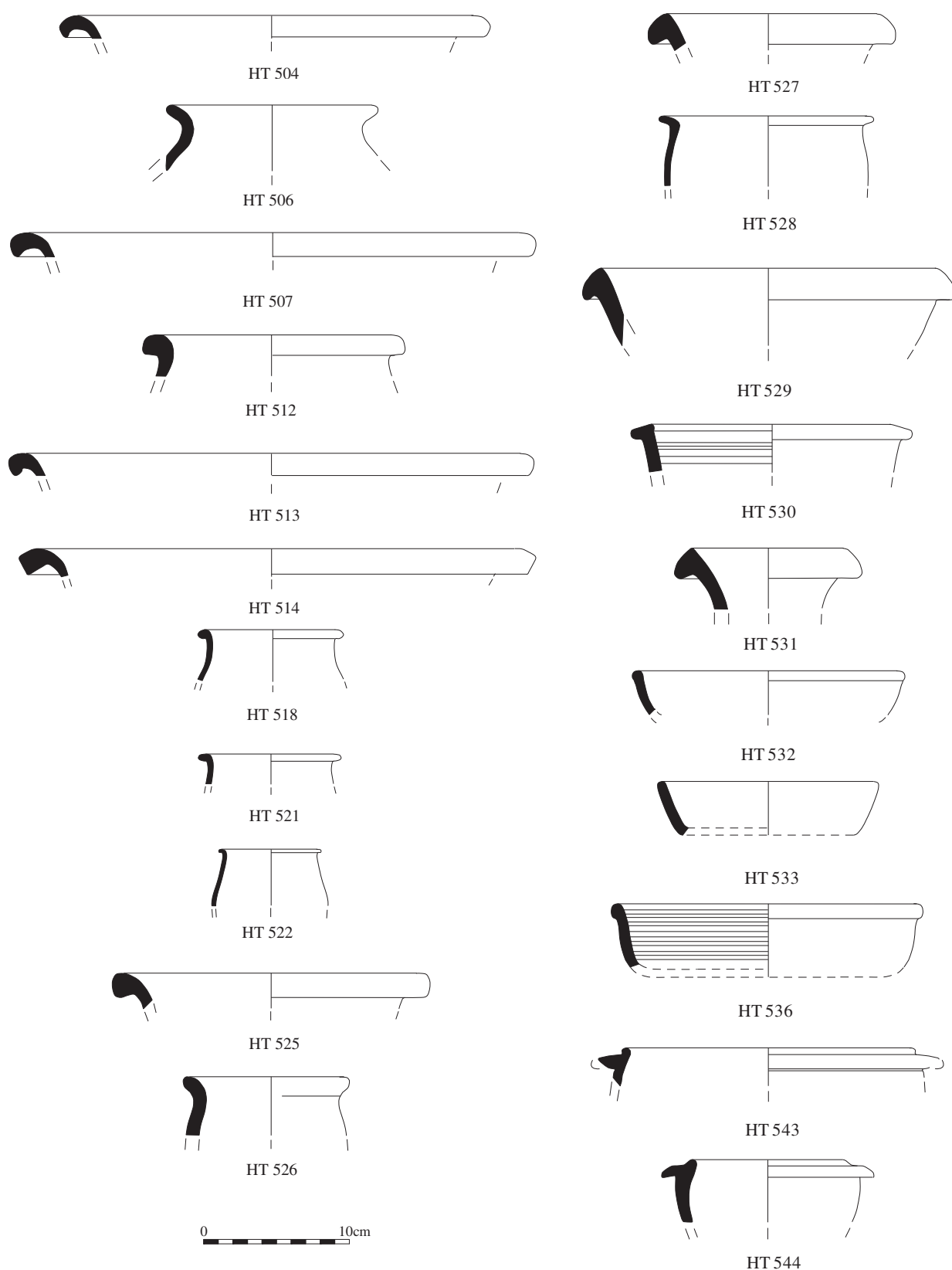


Fig. 6.4 Selected representative rims from amongst the assemblage arising from the NELALHS fieldwalking surveys (line-walking and intensive pick-up) in Corner Field. HT is the site code used, followed by an identifying number. All items are in fabric GREYB and of late 3rd to 4th century date bar the following: HT 504 GREY4 Late 3rd to 4th century, HT 512 GREY Roman, HT 522 GFIN Roman, HT 527 GREY4 Roman, HT 529 GREY4 Roman, HT 531 GREY4 Roman, HT 533 GREY3? Roman, HT 543 GREY Late 4th to early 5th century and HT 544 GREY Late 4th to early 5th century.

6.1.5 The Pottery from the Excavated Trenches

Note: Phases relate to the sequences per trench.

Trench A

Trench A: Phase 1A

Thirteen sherds (144g, RE 0.23) were retrieved from Layers (1050) and (1054). This small group included a burnished grey ware plain-rimmed dish and a Nene Valley type mortarium with a reeded rim (MRR). The group could be dated to the late third to fourth century AD.

Trench A: Phase 1

A burnished grey ware sherd and a sherd of shell-gritted Dales ware were retrieved from the interface of (1054) of Phase 1A and (1049) of Phase 1B, allocated the number (1024). These sherds probably date to the third to fourth century AD.

Trench A: Phase 1B

Six sherds (40g, RE 0.65) were recovered from contexts of this phase, comprising the laid chalk surface across the middle and western part of the trench. Sherds included the rim from a burnished grey ware flagon (Fig. 6.1 no.14) and a sherd of Dales ware. This small group could be dated to the late third to fourth century AD.

Trench A: Phase 1 or 2

Two grey ware sherds, in the GREY and GREYB fabric groups respectively and dating to the late third to fourth century AD were retrieved from Post hole [1034], fill (1033).

Trench A: Phase 2

Twenty two sherds dated to the Roman period (229g, RE 0.38) came from contexts of this phase, comprising the Flue [1028], Stake/Post Holes [1026] and [1030] and Scoops [1016] and [1044]. Types included lid-seated and double lid-seated jars in the late Roman GREY5 fabric, coarse quartz-gritted sherds in GRRO fabric, burnished grey ware, a wheel-made shell-gritted sherd, and shell-gritted Dales ware. The Roman pottery could be dated to the Final Roman period/late fourth century to early fifth century AD.

Trench A: Phase 2A

One hundred and seventeen sherds (1.561kg, RE 1.01) were retrieved from linear features attributed to Phase 2A, including Gully [1009] and Ditch [1063]. Of these five sherds were of post-Roman date (see Section 6.2). The pottery was of mixed date but the majority dated to the fourth century AD. The pottery present included colour-coated beakers including one with painted decoration, coarse quartz-gritted LCQU

sherds, Dales ware, and sherds of burnished grey ware. A small fragment of the shell-gritted IAGR2 fabric from an early Roman native tradition jar with a wedge-shaped rim was one of the few sherds that could be attributed an earlier date.

Trench A: Phase 2B

Thirty sherds (287g, RE 0.20) all of Roman date were retrieved from Ditch [1048]. The pottery from this group included grey ware, fine grey ware, burnished grey ware, shell-gritted Dales ware, a colour-coated sherd and a wheel-made shell-gritted double lid-seated jar. On the basis of the double lid-seated jar this group dates to the Final Roman period (late fourth to early fifth century AD). A single colour-coated sherd from a bowl dating to the third to fourth century AD was retrieved from context (1042), a part of (1071) by the western edge of [1048].

Trench A: Phase 2C

Ninety sherds (825g, RE 0.43) were retrieved from the late ditch cut [1068]. This medium sized fragmentary group included colour-coated ware, paint-decorated Swanpool oxidised ware, shell-gritted Dales ware, burnished grey ware and a double lid-seated jar in a coarse grey ware fabric (GRRO). Overall, types in this group date to the Final Roman period (late fourth to early fifth century AD).

Trench A: Phase 2 or 3

A single oxidised Roman sherd (1g) was retrieved from feature [1053], fill (1023).

Trench A: Medieval Furrows

Twenty nine sherds (501g, RE 0.11) were retrieved from medieval Furrow [1076], fills (1003) and (1007) at the western end of the trench. Whilst a grog-gritted vessel from this context is probably of Iron Age date the form and manufacture of many of the shell-gritted vessels, including obvious handmade items appear likely to be of middle-Saxon or later date and a grey ware sherd may be of a similar date to the shell-gritted wares (see Section 6.2). No pottery was associated with the fill of the furrow at the eastern end of the trench [1070], although some disturbance of the top of the Roman ditch fill contexts at that location is likely.

Trench A: Modern Ploughsoil across trench

The recovered pottery comprised a medium sized group, including shell-gritted post-Roman sherds and a modern glazed sherd. The Roman pottery present consisted of burnished grey ware forms including a 'Romano-Saxon' burnished grey ware bowl (Fig. 6.3 no.17), a burnished grey ware jar featuring burnished lines on the base (Fig. 6.3 no.21), a plain-rimmed dish and a bowl with an in-turned bead and flange rim. Other pottery present included Swanpool oxidised ware, a burnished oxidised bowl (Fig. 6.1 no.6), a double lid-seated jar and colour-coated ware.

Trench B

Trench B: Phase 1

Twenty six sherds (158g, RE 0.25) were retrieved from Phase 1 Gullies [2030] and [2039]. Two small sherds of post-Roman pottery thought to be intrusive are reported on by Young (Section 6.2). The pottery present included grey ware, colour-coated ware, a late Roman LROL oolite-gritted sherd and shell-gritted Dales ware. The Roman sherds could be dated to the fourth century AD.

Trench B: Phase 2

One hundred and seventeen sherds (998g, RE 0.66) were retrieved from Phase 2 Ditches [2006] and [2034]. Ten sherds of post-Roman pottery were present (see Section 6.2); two small sherds from [2006] are likely to be intrusive while eight from (2040) in [2034] are from the same vessel and might represent a shattered single intrusive sherd, or indicate the feature was still open into the post-Roman era. The Roman pottery from this phase included sherds from colour-coated beakers with funnel grooved rims, sherds of fine grey ware, and Swanpool type oxidised sherds. The majority of the shell-gritted pottery appeared to be Dales ware with a smaller quantity of other shell-gritted wares, however, no diagnostic forms were present. Greywares present included a strainer and wide-mouthed bowls. The majority of the recognisable forms were in burnished grey ware including a carinated bowl (Darling and Precious 2014, no.1160), a lipped bowl, a wide-mouthed bowl and a plain rimmed dish. Three small fragments of second century samian from [2006] are probably residual. Otherwise the large majority of the Roman pottery present dated to the late Roman period.

Trench B: Phase 3

Thirty nine sherds (200g, RE 0.15) were retrieved from Phase 3 Gullies east of [2006], namely [2007]/[2020], [2009], [2013] and [2016]/[2024]. Fifteen sherds (52g, RE 0.06) from this group were post-Roman (Section 6.2) which may date the features but if not suggests either they were still open in the post-Roman era or that this was an area of activity at this time with some disturbance of earlier (Roman period) deposits. The Roman pottery from this phase had a low average sherd weight (6.1g) possibly suggesting it was residual, although the area of these gullies was excavated with extra care (pers. comm. S. Willis), which may in part explain a high level of small fragment recovery. Few diagnostic Roman forms were present; small sherds of Dales ware, grey ware, burnished grey ware and other shell-gritted sherds. Sherds from Swanpool type mortaria with reeded rims were also retrieved.

Trench B: Unphased pottery

Twenty nine sherds (261g, RE 0.18) were presented for study from contexts that were unphased, being mainly unstratified and relating to trowel cleaning over the top of archaeological deposits at the base of the modern soils, though one sherd was from feature [2044] which also yielded a possible iron stylus: this produced a single pottery sherd of later Roman grey ware. Five of the sherds were post-Roman and are reported on by Young (Section 6.2). The Roman pottery present included (for this site) a typical range of Dales ware, grey ware and burnished grey ware including a narrow necked jar (J162). This pottery from the unphased deposits mainly dated to the late Roman period.

Trench B: Modern Topsoil and Ploughsoil across trench

Two hundred and eighty seven sherds (2.389kg, RE 1.47) were retrieved from modern deposits. Twenty seven sherds were post-Roman and are discussed by Young (Section 6.2). A similar range of Roman pottery to the stratified material was retrieved from this phase along with sherds of the coarse quartz-gritted GRRO and LCQU fabrics, a shell-gritted double lid-seated jar, a dish in the DWSHT fabric (Fig. 6.3 no.27), and Swanpool colour-coated and oxidised type wares.

Trench C

Trench C: Eastern Side: Phase 1-2

Thirty six sherds (260g, RE 0.18) were retrieved from the Ditches and Gullies of Phase 1/2, specifically [3035], [3037] and [3060]. No post-Roman pottery was recorded and the groups ranged in date from the mid-third to fourth century AD. A single sherd of the native tradition IAGR2 fabric, which was probably residual, ought to date to the second century AD, as does a sherd of Lezoux samian. The pottery included colour-coated ware, grey ware and burnished grey ware. Shell-gritted Dales ware was represented with lid-seated Dales ware jars the only diagnostic forms present.

Trench C: Eastern Side: Phase 3-4

One hundred and eighty one sherds (1.745kg, RE 0.99) were retrieved from the Phase 3/4 fills of Ditch [3029] and Gullies [3026] and [3027]. Two sherds of post-Roman material (11g) were retrieved from [3027] (see Section 6.2). Colour-coated pottery present included sherds from beakers; a small quantity of fine grey ware was also present. Dales ware made up the majority of the sherds present including rim sherds from a number of lid-seated jars with smaller quantities of grey ware, coarse grey ware (GREYC) and native tradition ware also present. It was noticeable that very little burnished grey ware was present (GREYB) perhaps suggesting

that the majority of the pottery entering these features was mid- to late third century in date.

Trench C: Eastern Side: Unphased Roman

Two sherds were attributed unphased to the Roman era. A colour-coated sherd from a beaker (feature [3052]) that dated to the third to fourth century AD and a sherd from a grey ware lipped bowl from Stake hole [3044] dated to the mid-second century AD or later.

Trench C: Western Side: Phase 1

Dryer Flue [3511]/[3515]

A group of eleven sherds (109g, RE 0.18) of Roman pottery came from the fill contexts (3509), (3510) and (3518) of this feature. The group included a grey ware bowl with a plain rim, a sherd from a lipped bowl, a grey ware lid with a bifid rim and shell-gritted Dales ware. One sherd shows vitrification perhaps as it was within the flue when the latter was in use. Types represented date from the mid-third to the fourth century.

Dryer Flue [3050]

A group of fifty nine sherds (760g, RE 0.81) of Roman pottery came from the fill contexts (3018), (3041), (3049) and (3055) of this feature. The group included sherds of self-slipped oxidised ware and a large shell-gritted Dales ware jar (Fig. 6.3 no.29). Greywares included a lipped bowl in a burnished grey ware and a necked jar or beaker. A colour-coated flagon or flask with a narrow neck (as Howe *et al.* 1980, fig. 6.67) is present. The date range of the types is late third to fourth century.

Trench C: Western Side: Phase 2

From Pathway metallurgy

One hundred and eight sherds (2.491kg, RE 2.29) came from the metallised surfacing (3016), (3057), (3500), (3502), (3550) and (3740) comprising generally unabraded items from late third to fourth century vessels. This comparatively large group included a basal sherd from a colour-coated jar or flagon, a hemispherical flanged bowl in an oxidised fabric, self-slipped and imitating Drag. form 38 (Fig. 6.1 no.5), shell-gritted Dales ware, a lipped bowl, burnished grey ware and plain-rimmed grey ware dishes, plus a necked jar or bowl also in fine grey ware and Black Burnished ware 2. A large straight-sided bead and flange bowl with burnished wavy line decoration was also present (Fig. 6.1 no.15), as was a smaller similar flanged bowl with more angled wall (Fig. 6.1 no.9), together with a wide-mouthed bowl with undercut rim (Fig. 6.1 no.12).

From the post pit and settings [3025], [3031] and [3033]

Some sixty nine sherds (1.028kg, RE 0.68) came from deposits filling this post-setting group. Context (3030), the fill of setting [3031], comprised a small

group including burnished grey ware and shell-gritted Dales ware jars. Context (3032) the fill of post-setting cut [3033] produced a small group including a bowl in a burnished oxidised fabric, grey ware and shell-gritted Dales ware. The types from these settings are again late third to fourth century. The upper cut of these settings [3025] yielded a fresh medium sized group of fourth century types including a Nene valley colour-coated bowl with a plain rim (Fig. 6.1 no.2), a wide-mouthed bowl in grey ware, a large straight-sided bowl with a drooping flange (Fig. 6.1 no.10) and again shell-gritted Dales ware jars (Fig. 6.3 no.28).

Post Pit [3755] Phase 2A

Only three sherds (24g, RE 0.0) of Roman pottery came from the fill contexts (3753) and (3754) of this feature including a later second century fragment from a samian bowl and a shell-gritted sherd, probably Dales ware.

Gully [3767] Phase 2A

A group of four sherds (276g, RE 0.17) of Roman pottery came from the fill (3766) in this feature. The group included shell-gritted Dales ware jars and a large grey ware jar or bowl. Types represented date from the mid-third to the fourth century.

Post Pit [3761]/[3736] Phase 2B

A group of twenty eight sherds (577g, RE 0.38) of Roman pottery came from the fill contexts (3736), (3742) and (3760) of this feature. The group included a large wide-mouthed bowl with an undercut rim, a straight-sided bead and flange bowl in a burnished grey ware fabric, a grey ware folded beaker, shell-gritted Dales ware and a large native tradition bowl. One sherd of later second century samian apart the types present date from the late third to fourth century.

Ditch [3763] Phase 2B

A group of thirteen sherds (220g, RE 0.22) of Roman pottery came from the fill context (3762). The group included a sherd from a strainer, a large wide-mouthed bowl and wheel-made shell-gritted ware. Types present date from the late third to fourth century.

Other Phase 2 features

Just two sherds were recovered from the fill of Gully [3775] (26g, RE 0.0), including Roman grey ware. A group of five sherds (25g, RE 0.0) of Roman pottery came from the fill of Post Hole [3522], including part of a Roman grey ware bowl with hooked everted rim, the rim of which was recovered during cleaning across this feature.

Trench C: Western Side: Phase 3

Gully [3719]

A group of sixty eight sherds (489g, RE 0.38) of Roman pottery came from the fill contexts of this feature (3711) and (3727). The group included sherds from a large bowl with a lipped rim (Fig. 6.3 no.18),

oxidised ware, native tradition ware, a white ware mortarium sherd from the Midlands (of earlier Roman date), a jar with acute burnished lattice decoration, a dish with a grooved rim, and shell-gritted Dales ware. Types present date from the mid-second to fourth century.

Dryer Flues and Stoke Pits at the western end of Trench C

An assemblage of fifty sherds (601g, RE 0.69) was recovered from the four drying ovens attributed to this phase, the majority from Flue [3745] and Stoke Pit [3516]. Eleven sherds of mixed date came from the fill contexts of Flue [3751] and Stoke Pit [3752] including shell-gritted Dales ware, a comb stamped beaker of Market Rasen Parisian ware (BK110 form, stamp as Darling C04 or C05 (Darling unpublished)), earlier Roman South Ferriby grey ware and other grey ware (all Roman), plus a rim from a large straight-sided bowl with a lipped rim and coarse handmade sherds of post-Roman or likely post-Roman date (cf. Section 6.2). Flue [3739] and Stoke Pit [3780] produced a very small number of sherds including grey ware and a sherd from a jar or bowl in an oxidised fabric. Flue [3781] and terminal [3759] yielded just a single sherd of burnished grey ware. Flue [3745] and Stoke Pit [3516] produced thirty four sherds including a fragment from a cheese press in a burnished grey ware fabric, other burnished grey ware, a grey ware straight-sided bead and flange bowl, a large bag-shaped beaker with an everted rim in a fine grey ware fabric (Fig. 6.1 no.4), a grey ware lipped bowl, South Ferriby grey ware and shell-gritted Dales ware. Discounting two very small fragments of samian ware and perhaps the South Ferriby items, likely to be residual, the Roman pottery types from these features date from the mid-third into the fourth century.

Trench C: Western Side: Phase 4

Ditch [3718]

One hundred and sixty sherds (1.874kg, RE 1.28) were recovered from the fill contexts of this ditch (3505),

(3506), (3507), (3707) and (3723). The group includes a fine grey ware sherd with Parisian ware type stamps (Fig. 6.2), a colour-coated sherd, a bowl in an oxidised fabric, self-slipped oxidised ware with painted lattice decoration, various greywares including fine grey ware and a grey ware wide-mouthed bowl, a grey ware flanged bowl variant (Fig. 6.1 no. 8), a flagon or jar with a pedestal base in an oxidised fabric, a jar or bowl in a coarse grey ware fabric, native tradition ware, a bowl with an in-turned rim and a bowl with an almond-shaped rim, and shell-gritted Dales ware, including sherds from jars and a large jar or bowl. Types represented date from the late third to the fourth century.

Ditch [3771]

Twenty two sherds (405g, RE 0.20) were recovered from the fill of this shallow ditch (3770). This fourth century group included paint-decorated oxidised self-slipped ware, a grey ware bowl with a plain rim and a shell-gritted jar or bowl.

Trench C: Medieval Furrows

Eighty nine sherds (650g, RE 0.62) came from furrow fill deposits at C. Generally the sherds are small and abraded with one or two exceptions particularly from Furrow [3720] where fresher Roman material including larger sherds had been disturbed at the base of the furrow. Pottery included burnished grey ware, coarse grey ware, a Black Burnished ware 1 vessel with an everted rim, from (3713) a grey ware bowl with an in-turned bead and flange rim (Fig. 6.1 no.11), also from (3713) a large Crambeck Parchment ware platter (Type 10) decorated with groups of four painted lines on the rim edge (decoration type E008) and a band of S-shaped decoration internally (E007) (Fig. 6.1 no.3; Fig. 6.5), a bowl or lid in an oxidised fabric, self-slipped oxidised ware, colour-coated sherds, including one with rouletted decoration, shell-gritted Dales ware and sherds from coarse quartz-gritted greywares (cf. Section 6.2). Glazed medieval body sherds were also present in more than one context.



Fig. 6.5 The painted Crambeck Parchment ware vessel fragment from Furrow [3720] probably dislodged from one of the Late Roman features cut by the furrow; the rim and underside show signs of exposure to heat and perhaps soot.

Trench C: Modern Topsoil and Ploughsoil across trench

Five hundred and twenty sherds (3.953kg, RE 3.31) from Trench C were recovered from modern soils overlying the trench. Thirty five of these sherds (157g) were post-Roman and are reported on by Young (Section 6.2). The Roman sherds from this group were mixed, the earliest recognisable material was native tradition ware including a lid-seated jar (Fig. 6.3 no.26) and a small number of handmade rock-gritted sherds of Iron Age or early Roman date. The group mostly consisted of a typical range of local late Roman grey ware, burnished grey ware and shell-gritted Dales ware jars. Unusual fine ware vessels included a sherd of Central Gaulish Black ware and a possible sherd of Hadham oxidised ware. A range of coarse quartz-gritted late or Final Roman sherds were present including a large vessel (Fig. 6.3 no.22), Dales type and other lid-seated jars in the GREYC fabric, and a sherd that appeared likely to be an example of the Lincoln LCOA fabric. A range of late-Roman sherds in the SHEL fabric group were recorded including an example of a double lid-seated jar. Swanpool type colour-coated and oxidised wares were also present.

Trench D

Trench D: Phase 1A

Twenty eight sherds (278g, RE 0.31) were retrieved from the ditch cut [4075] of Phase 1A. The pottery included a sherd from a colour-coated beaker, fine grey ware, a grey ware carinated bowl, a grey ware jar with a rilled shoulder, burnished grey ware and a shell-gritted sherd. A rim from a samian cup of mid-second century date could be residual. The bulk of the pottery from this group dates to the late third to fourth century AD.

Trench D: Phase 1B

Eleven sherds (78g, RE 0.0) were recorded from the fills of the ditch re-cut [4021] of Phase 1B, including a sherd from a hemispherical flanged bowl in a Swanpool oxidised type fabric, a burnished grey ware handled jar and a colour-coated beaker. This small group of sherds could also be dated to the late third to fourth century AD.

Trench D: Phase 1

A single Roman grey ware sherd (1g, RE 0.0) was retrieved from Gully [4035].

Trench D: Phase 2

Sixty one sherds (471g, RE 0.26) were recorded from Phase 2 features, specifically the Oven and Stoke Pit [4058]/[4062]. Of these, one was identified as post-Roman (Section 6.2), presumably intrusive. The pottery present included fine grey ware, a worn Swanpool type mortarium (1), shell-gritted sherds in

the DWSHT and SHEL fabrics, burnished greywares and coarse greywares in the GREYC and GRRO fabrics. The Roman pottery from this group had a fairly low average sherd weight and few diagnostic forms. A late Roman date appears most likely for the majority of the sherds, perhaps towards the end of the fourth century AD if the coarse grey ware sherds present were from double lid-seated jar type vessels.

Trench D: Phase 3

Two hundred and four sherds (2.727kg, RE 1.19) were retrieved from Phase 3 features and deposits including the sooty layers. Four post-Roman sherds were present (Section 6.2). The Roman pottery from this group was nearly all late Roman. Four sherds were present that should date to the second century AD or earlier (including samian, IAGR and IASH). Amongst the assemblage there were sherds of Oxfordshire red-slipped ware, Sparry mineral calcite-gritted ware in the Huntcliff or 'proto-Huntcliff' tradition (Fig. 6.3 no.32), coarse greywares (GRRO, GREYC), Lincoln LCOA coarse grey ware, including a double lid-seated jar and a late Roman oolite-gritted sherd. The latter fabric is typically only seen amongst the latest Roman groups from this part of Lincolnshire dating from the later fourth to early fifth century AD. Other wares present included Swanpool type oxidised wares, burnished grey ware wide mouthed bowls (Fig. 6.3 no.19), a cheese press and a handled bowl (Fig. 6.3 no.16). Shell-gritted Dales ware and a sherd from a colour-coated beaker were also present. A further sherd from a paint decorated Swanpool oxidised beaker was retrieved from the sieved soil sample from Layer (4017) (pers. comm. S. Willis).

Trench D: Phase 4

Forty four sherds (701g, RE 0.68) were retrieved from Phase 4 deposits from Ditch [4031]. These included two post-Roman sherds (Section 6.2). The Roman pottery was predominantly late Roman with the addition of two sherds of fine grey ware that may have been of an earlier date. The group included sherds from a paint-decorated Swanpool type oxidised ware hemispherical flanged bowl and a straight sided bead and flanged bowl, Swanpool type colour-coated ware, burnished grey ware, shell-gritted Dales ware and a coarse quartz-gritted sherd possibly in the Lincoln LCOA fabric. The Swanpool type wares would suggest a date no earlier than the fourth century AD, with the coarse grey ware sherd perhaps suggesting that some of the pottery present was manufactured in the last phase of Roman pottery production in Lincolnshire.

Trench D: Unstratified sherds from trench cleaning

Three Roman sherds (17g, RE 0.0) from Trench D cleaning layer (4039) could be dated to the late fourth to early fifth century AD and include a coarse grey ware sherd probably from the Lincoln area (LCOA?).

Trench D: Modern Ploughsoil across trench

Two hundred sherds (2.581kg, RE 1.88) were recovered from the ploughsoil over Trench D. Of this assemblage fourteen sherds were of post-Roman date and are reported on by Young (Section 6.2). The Roman pottery present was mixed, as would be expected, however, no examples of native tradition wares were present and few vessels that would suggest a second century AD date. This group included colour-coated sherds from beakers and a straight sided bead and flanged bowl along with fine grey ware and Swanpool oxidised wares. Burnished greywares were more common than unburnished grey ware, a lug-handled jar (Fig. 6.1 no.13) in the GREY1 fabric was one of the few unburnished vessel forms that could be identified. A broader range of diagnostic sherds were present in the GREYB fabric, including a beaker with an everted rim, a plain rimmed dish and straight sided bowls with bead and flanged rims. A range of coarse grey ware sherds were also present including a number that appeared similar to examples of the Lincoln LCOA type. A further coarse oxidised sherd, probably also of a similar late Roman tradition, was also present. Wheel-made shell-gritted wares indicative of the double lid-seated jar and Huntcliff jar traditions (Fig. 6.3 nos 30-1) were present suggesting activity on the site at the very end of the Roman period.

*Trench E***Trench E: Phase 1A**

One small undiagnostic body sherd (2g) of Roman grey ware pottery was the only ceramic item present in the extant fill of Ditch [5022].

Trench E: Phase 1B

Thirty eight sherds (254g, RE 0.13) were attributable to Trench E Phase 2 deposits from the recut ditch [5003]. Two post-Roman sherds were retrieved and are discussed elsewhere (Section 6.2). Also of note was a handmade quartz and grog or clay pellet-gritted handmade sherd with an oxidised external surface and black core. This small sherd had some traces of applied clay on the surface of the vessel and may have been of earlier prehistoric date; it was undoubtedly residual in this context. The average sherd weight of the Roman pottery was low at 6.68g with a number of sherds showing signs of abrasion. A rim fragment from a native tradition handmade jar of later first to second century AD date (Fig. 6.3 no.24) was an unusual vessel within the group. A small body sherd from a grey Rusticated ware jar probably dating to the later second century was also present, as were three samian ware sherds, including those from the base of the cut, and dating to the mid-second century. The remainder

of the pottery consisted of a typical range of fine grey ware, shell-gritted Dales ware, a straight sided bead and flanged bowl in a burnished grey ware and a coarse grey ware sherd (GREYC), these predominantly dated to the late Roman period.

Trench E: Unstratified sherds from trench cleaning

Three Roman sherds (7g, RE 0.0) were recovered from Trench E during cleaning across the trench following removal of modern soils.

Trench E: Modern Topsoil and Ploughsoil across trench

Seventy three sherds (362g, RE 0.14) were retrieved from the modern soils over Trench E. The seven post-Roman sherds from this group are discussed by Young (Section 6.2). The Roman pottery consisted of small, often abraded, sherds with a low average sherd weight (4.95g). A typical range of late Roman pottery was retrieved all of which was similar to material from the earlier deposits from which doubtless it derived.

Trench F

Two grey ware sherds (6g, RE 0.0) were retrieved from the ploughsoil across Trench F. These were the only pottery finds from the trench and could only be broadly dated to the Roman period.

6.1.6 The Samian Ware

Steven Willis

6.1.6.1 Introduction

A total of 38 sherds of samian ware was recovered in the course of the fieldwork at Hatcliffe Top between 2007 and 2016. All five of the main trenches produced examples of samian, together with some collected items from across the surface of the field. The highest number of sherds came from the largest trench but at all locations the quantities recovered were very small. Nine items were rim sherds, three came from bases and the remainder (26 items) were body sherds. This amounted to just 147grams with a RE (Rim Equivalence) total of 0.26; part of one manufacturer's stamp is present. Approximately 37 vessels are represented, all of which are in Central Gaulish ware from Lezoux, with one item possibly from the Argonne region, although this item seems more likely to be from Lezoux (the fabric of all sherds was examined under binocular magnification with integral light source at x20). The items all date to the second century AD. Only a few sherds, however, were

present in contexts with which they were potentially contemporary, as evidently many sherds comprise residual finds in the contexts from which they were recovered. A remarkable aspect of the material is its highly fragmented character: only five sherds weigh more than 6g while 26 sherds weigh 2g or less. In part this reflects the familiar trend for this red, often shiny, ceramic material to be more readily discerned against a soil background than can be the case with pottery of other colours, and hence a bias in recognition and recovery even with very small pieces. However, in this case evident high retrieval of small sherds was assisted, and is explained, by the particularly careful recovery of material through hand-digging (as no machining was undertaken at the site) and the excavation of contexts by trowel where the eye is near the soil.

6.1.6.2 Catalogue of the Samian Ware

The catalogue lists all samian sherds from the fieldwork of 2007-2016. It adheres to a consistent format. Each entry per context relates to an individual vessel represented in that context. Sherds are ordered by trench and within trench by context; then the following data are given: the number of sherds and their type (i.e. whether a sherd is from a rim, base (i.e. footring), or body of a vessel, the source of the item (Central Gaulish is abbreviated to CG), the vessel form where identifiable, the weight of the sherd/s in grams, the percentage of any extant rim (i.e. the REVE rim equivalence figure, where 1.00 would be a complete rim circumference) or base (BEVE denoting base equivalence), both abbreviated, to RE and BE, the rim and base diameter measurements, and an estimate of the date of the sherd/s in terms of calendar years, this being the date range of deposits with which like pieces are normally associated. No items show decoration. The presence of other features such as burning is noted. If the item is thought to be residual when present in a stratified context this probability is noted.

Trench A

Context (1004). Fill of Gully [1009] (Residual)

Base sherd, CG Lezoux, Drag. 31R large bowl, 20g, Diam. c. 100mm, BE: 0.08, c. AD 160-200. Part of a stamp is represented reading IVI[or IVL[. Burnt.

Context (1015). Fill of Shallow Scoop [1016] (Residual)

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200. Small fragment from the floor of a vessel near the footring.

Context (1047). A fill of Ditch cut [1048] (Residual)

Body sherd, CG Lezoux, probably Drag. 38 bowl, 1g, c. AD 130-200. Small fragment from the vessel flange.

Context (1051). A fill of Ditch cut [1063] (Residual)

Body sherd, CG Lezoux, form not identifiable, less than 1g, c. AD 120-200. Tiny flake with one original surface extant.

Trench B

Context (2001). Ploughsoil from within the area of Trench B

Body sherd, CG Lezoux, form not identifiable, 2g, c. AD 140-200. Abraded and largely excoriated.

Context (2017). A fill of Ditch cut [2006] (Residual)

Body sherd, CG Lezoux, form not identifiable, 2g, c. AD 120-200. Essentially a large flake; the outer surface and margin are missing.

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200. A small flake.

Rim sherd, CG Lezoux, probably Drag. 31 dish but not certain, 1g, Diam. uncertain, RE: 0.03, c. AD 150-200. A small fragment displaying vestiges of a bead rim.

Context (2035). Unstratified; from spoil of Trenches B or C

Body sherd, CG Lezoux, Dech. 68 beaker, 1g, c. AD 150-200. From near the base of the vessel; the interior surface is slipped but the surface displays slight rilling marks indicating a closed form with an unsmoothed interior. The exterior includes an area of the junction of the lower wall with the top of the footring, strongly suggestive of Déchelette form 68.

Trench C

Context (3001). Ploughsoil within Trench, at north-eastern end of Trench C

Rim sherd, CG Lezoux, Drag. 33 cup, 6g, Diam. 130mm, RE: 0.07, c. AD 120-200.

Body sherd, CG Lezoux, Drag. 33 cup, 1g, c. AD 120-200. Small fragment from the junction of the vessel wall and floor. Different vessel to the other Drag. 33 represented in this context.

Body sherd, probably CG Lezoux though possibly Argonne, form not identifiable, 2g, c. AD 120-200. Pale orange slip and orange fabric. Probably from near the junction of the vessel floor and the footring. Abraded; technically a flake with the upper original surface missing.

Context (3005). Ploughsoil in area over Feature [3025] etc.

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200. Abraded flake.

Context (3038). Fill of Ditch cut [3037] (Residual)

Body sherd, CG Lezoux, late Curle 11 or early Drag. 38 bowl, 3g, c. AD 130-150. Fragment from a flange which is quite square in profile, as with the flanges A and B of Drag. 38 illustrated by Webster (1996, 51). The gloss finish is of particularly good quality and the fabric shows a brittle fracture indicative of high firing temperature characteristic of this period from this source.

Context (3502). Part of Cobble Path, Phase 2 towards south-west end of Trench C (Residual)

Base sherd, CG Lezoux, from a dish, 6g, Diam. 100mm, BE: 0.17, c. AD 120-200.

Context (3505). A fill of Ditch cut [3718], Phase 4 at south-west end of Trench C (Residual)

Rim sherd, CG Lezoux, probably Drag. 38 bowl, 2g, Diam. uncertain, RE: c. 0.01, c. AD 150-200. Small abraded fragment; highly burnt with original red gloss surfaces now black.

Context (3700). Ploughsoil within Trench, at south-west end of Trench C

Rim sherd, CG Lezoux, form not identifiable, less than 1g, Diam. uncertain, RE: c. 0.01, c. AD 120-200. Very tiny fragment, probably from a bead rim.

Body sherd, CG Lezoux, form not identifiable, less than 1g, c. AD 120-200. Very tiny fragment.

Context (3710). Fill of Flue [3739], Phase 3 at south-west end of Trench C (Residual)

Body sherd, CG Lezoux, probably Drag. 33 cup, 1g, c. AD 120-200. Very small fragment. From different vessel to the examples of this form represented in context (3001).

Context (3723). A fill of Ditch cut [3718], Phase 4 at south-west end of Trench C (Residual)

Rim sherd, CG Lezoux, probably Drag. 31 dish, 4g, Diam. uncertain, RE: c. 0.01, c. AD 150-200. Burnt.

Context (3736). Main fill of Post-Setting [3761], Phase 2B at south-west end of Trench C

Body sherd, CG Lezoux, Drag. 31 dish, 4g, c. AD 150-200. Stained at the fracture by proximity to sooty material; otherwise in good state of preservation. From different vessel to the example of this form in context (3723).

Context (3741). Fill of Stoking-Pit [3516], Phase 3 at south-west end of Trench C (Residual)

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 150-200.

Context (3753). A fill of Post-Setting [3755], Phase 2A at south-west end of Trench C (Residual?)

Body sherd, CG Lezoux, from a large bowl, probably Drag. 31R, 15g, c. AD 160-200. A comparatively well-preserved sherd from low down on the vessel wall and most likely from a Drag. 31R rather than a 37, the only other reasonable possibility.

Trench D

Context (4000). Ploughsoil from within the area of Trench D

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200. Flake from a vessel floor.

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200. Flake; from a different vessel to the above item in this context.

Context (4002). Square metre B4. Ash and soot rich Layer, Phase 3 (Residual)

Rim sherd, CG Lezoux, Drag. 18/31R large dish, 5g, Diam. uncertain, RE: 0.03, c. AD 130-160. Slightly burnt or stained by soot at the bead of the rim.

Context (4008). A fill of Ditch cut [4031], Phase 4 (Residual)
Rim sherd, CG Lezoux, probably Drag. 31R or 37 large bowl, 1g, Diam. uncertain, RE: c. 0.03, c. AD 120-200. Tiny fragment, comprising a large bead rim. Slightly burnt.

Context (4068). Main fill of Ditch cut [4075], Phase 1A

Rim sherd, CG Lezoux, late Drag. 27 cup, 1g, Diam. c. 100mm, RE: 0.04, c. AD 130-160.

Trench E

Context (5000). Topsoil from within the area of Trench E

Body sherd, CG Lezoux, form not identifiable, 1g, c. AD 120-200. Small fragment with an original (exterior) surface surviving on one side.

Body sherd, CG Lezoux, form not identifiable, less than 1g, c. AD 120-200. Small fragment.

Body sherd, CG Lezoux, form not identifiable, less than 1g, c. AD 120-200. Small flake.

(All three sherds are from different vessels).

Context (5006). An upper fill of Ditch cut [5003]

Body sherd, CG Lezoux, form not identifiable, less than 1g, c. AD 120-200. Very tiny flake with an original surface on one side; this surface is flat and, unusually, unslipped, so perhaps from the underside of a footring.

Context (5014). Lowest fill of Ditch cut [5003]

Two non-conjoining body sherds from the same vessel, CG Lezoux, Drag. 18/31R dish, 30g, c. AD 135-160. The wall carination is not pronounced and the profile suggests this is an example comparatively late in the life of this form, as it evolves into Drag. 31R.

From the Surface of the Ploughsoil in Corner Field

The 2007 Season, Context (1000)

Rim sherd, CG Lezoux, Drag. 18/31 or 31 dish, 2g, Diam. uncertain, RE: c. 0.03, c. AD 120-200. Flake from the outer part of a rim with extant bead.

Body sherd, CG Lezoux, Drag. 36 dish, 21g, c. AD 120-200.

From the floor and wall of the vessel, below the flanged rim; the floor is comparatively thick. Somewhat abraded.

The 2008 Season, Context (2000)

Base sherd, CG Lezoux, from a dish, 1g, Diam. c. 100mm, BE: 0.07, c. AD 120-200. Flake from the outer part of a footring. Possibly from the same vessel as in context (3502).

The 2015 Season, Context (3715)

Body sherd, CG Lezoux, form not identifiable but perhaps from a Drag. 33 cup, 2g, c. AD 120-200. A small fragment from the floor of a vessel; the floor is flat and the sherd comes from near the junction with the footring. Burnt.

6.1.6.3 Chronology

All of the samian ware dates, by conventional assignment, to the second century AD, through the years 120-200. All the sherds from Hatcliffe Top occur in varieties of Lezoux ware fabric characteristic of a second century date. That is to say vessels of these

Table 6.5 The samian ware from Hatcliffe Top by date.

Date Range	Imperial Period	Number of Examples
c. AD 120-200	Hadrianic-Antonine	23
c. AD 130-150	Late Hadrianic to early Antonine	1
c. AD 130-160	Late Hadrianic to early Antonine	2
c. AD 130-200	Late Hadrianic to Antonine	1
c. AD 135-160	Late Hadrianic to early Antonine	1
c. AD 140-200	Antonine	1
c. AD 150-200	Antonine	6
c. AD 160-200	Mid-Late Antonine	2

types are most typically recovered from contexts of this date, though of course individual vessels may have had a longer use, especially if they were curated. It has become increasingly apparent that samian ware is often treated differently to other types of Roman pottery and some proportion seems to have had a particularly long lifespan, beyond the end of the second century (cf. Willis 2005, 5.8; Wallace 2006) and this may be the case with some items from Hatcliffe Top.

A proportion of the assemblage can be identified to form type and where this is possible the form types represented are typical of this c. AD 120-200 date range. Some 17 items were too small to be able

Table 6.6 The samian ware from Hatcliffe Top by form and functional category.

Find Location and Form Type	Number of Vessels	Functional Category
Trench A		
Drag. 31R	1	Large plain bowl
Drag. 38	1	Plain bowl
Form not identifiable	2	-
Trench B		
Drag. 31	1	Dish
Form not identifiable	3	-
Trench B or C		
Dech. 68	1	Decorated beaker
Trench C		
Drag. 33	3	Cup
Drag. 38	1	Plain bowl
Curle 11 or Drag. 38	1	Plain bowl
Drag. 31R	1	Large plain bowl
Drag. 31	2	Dish
Dish	1	Dish
Form not identifiable	5	-
Trench D		
Drag. 27	1	Cup
Drag. 18/31R	1	Large plain dish
Drag. 31R or 37	1	Large bowl
Form not identifiable	2	-
Trench E		
Drag. 18/31R	1	Large plain dish
Form not identifiable	4	-
Surface of Field		
Drag. 18/31 or 31	1	Dish
Drag. 36	1	Dish
Dish	1	Dish
Form not identifiable	1	-
Totals:	37	

to assign to a specific form or form class, while two items could only be attributed to the dish category. Of the remaining 18 vessels where the form could be discerned all lie within the c. AD 120-200 bracket, in terms of normal find-provenance for examples at other sites. Amongst these items four are earlier types and eight later, while the remainder cannot be assigned a close date bracket. The earlier types are a bowl of late Curle 11 type or early Drag. 38, c. AD 130-150, a Drag. 27 cup dating c. AD 130-160, and two Drag. 18/31R large dishes attributable to c. AD 130-160. These types might have arrived at the site before c. AD 150, although on the other hand, as types common in the middle of the century they could, equally, have arrived shortly after that date. The later types include three Drag. 31 dishes dated c. AD 150-200 and two Drag. 31R bowls dated c. AD 160-200, together with a Drag. 38 bowl that looks to be post c. AD 150 on the basis of attributes, and the sherd seemingly from a Déchelette 68 beaker, c. AD 150-200. The emphasis therefore is on the second half of the second century, a trend also perhaps reflected in the ratio of cup forms 27 and 33. Generally amongst samian assemblages in Britain the Drag. 27 becomes rare after c. AD 160 when the Drag. 33 became the predominant cup form (Willis 2005, 5.3.2.3). At Hatcliffe Top the ratio of 33s to 27s is 3:1 and so suggests a later second century tendency, albeit on meagre evidence. No items show evidence of repair or excessive wear that might be taken as indicators of prolonged use.

In sum, the samian most diagnostic of date points to the arrival of the bulk (if not all) of the samian at the site from the mid-second century into the later part of that century, or the acquisition by its inhabitants of types dating from that time. There is no East Gaulish ware present nor especially late Central Gaulish types that might have carried the samian chronology more firmly to the end of the second century and into the third century, this despite the geography of the site on the eastern fringe of England where East Gaulish ware has been thought to be more prominent than elsewhere (see Willis 2005, 6.7 for discussion of this idea).

6.1.6.4 Forms

Of the twenty items attributable to a form only one is from a decorated vessel. This is a low ratio by any measure, even for a rural site (cf. Willis 2005, 7.3.9) and on the face of it might be taken as an indication of lack of wealth at this time (that is in the second century AD). However, this may not be a particularly robust index given the small sample size and the highly fragmented nature of the material where sherds from decorated items may be present but not discernible

(there is one rim sherd that just might be from a Drag. 37 decorated bowl from Trench D). Moreover, the one fairly certain decorated type is an unusual one: a large beaker of Déchelette form 68, which, when intact, would doubtless have been a noteworthy and comparatively valuable table-piece. This is a reminder that occasional items of samian at rural locations can be striking (Willis 2005, 9.5.4).

Of the plain forms present nothing stands out in terms of function. Cup forms present are Drag. 27 and 33, being standard samian forms in the second century (cf. above). Dishes and bowls, larger and smaller, comprise the bulk of this modest sized group: nine dishes and six bowls. In practice these types may well have served similar purposes.

6.1.6.5 The Incidence of Samian by Trench Location

Four sherds of samian came from Trench A. Three pieces were small fragments. All four items appear to be residual given the place of their contexts in the trench sequence and through the presence of later wares in the same contexts. The gully fill (1004) produced a comparatively large fragment of a Drag. 31R bowl with part of a stamp, being a name beginning, probably Julius or similar, but insufficient to identify the workshop/manufacturer. Four sherds came from Trench B, again all tiny and the three stratified items are again residual in the ditch fill (2017). The context of the sherd of the Déchelette beaker 68 seems likely to have been topsoil from either the north-eastern two-thirds of Trench B or the north-eastern end of Trench C in 2008 as it was found in the spoil heap mainly composed of those soils.

Fourteen sherds were recovered from across Trench C though only one was of any size (15g). Several items are clearly residual, such as the sherds from the late ditch [3718]. By contrast perhaps some sherds were deposited not quite so long after use. Sherds in question would perhaps include the dish fragment from the pathway surface (3502) of Trench C Phase 2 if that samian had had a long-life. Two other items of Phase 2 come from the post setting cuts [3755] of Phase 2A (a Drag. 31R dating to c. AD 160-200) and a sherd from a Drag. 31 [3761] of Phase 2B (dating to c. AD 150-200). Two very small fragments came from the flue/stoking pit cuts of Phase 3 and are likely to be residual 'noise'. Finally, ditch fill (3038) produced a body sherd of an early Drag. 38 or late Curle 11, though the date of other pottery from this deposit suggests this item to be residual. Trench C produced most of the pottery to certainly date after c. AD 150; this is partly explained by the fact that it produced more samian sherds than

other trenches, and perhaps their stratified nature meant they were protected from further degradation so therefore larger and thereby more closely datable than the more fragmentary pieces, that could potentially also be of such date, recovered elsewhere.

From Trench D came five sherds, including two flakes from the ploughsoil, and two other items residual in later deposits (from contexts (4002) and (4008)) with soot staining or burnt, which is not surprising given the features and layers encountered in this area. Contrastingly the main fill of the mid-to-late Roman ditch cut [4075] produced a rim sherd from a Drag. 27 cup just possibly contemporary with this feature.

The six sherds from Trench E include three very small fragments from the topsoil over the archaeological layers, while three sherds came from the fills of Ditch [5003]. Of the latter one comes from the upper fill (5006), again a very small item. Two comparatively large and well-preserved sherds were, however, recovered from the bottom of this ditch, from context (5014), lying around 40cm apart. These came from the same large dish dating to c. AD 135-160. These pieces are quite significant for dating purposes as they are consistent with the date of the other few sherds of Roman pottery from this ditch and its predecessor [5022] indicating this ditch could have been in use in the mid-Roman period, possibly in the mid-late second century and/or not long after. This also accords with its likely contemporaneity with Ditches [4075] and [4021] (of Trench D) as suggested by the sequence at D and the morphology of the site indicated by the geophysical survey.

Only four sherds were recovered from the surface of the field during the seasons of work at the site 2007-2010 and 2014-2016. No systematic surface collection was undertaken in this field during those seasons, having been previously conducted in 2005. Indeed, this was not possible in 2007 as the field had only been recently deep-ploughed while in 2008, 2010, 2014 and 2016 there was either standing crop or standing cereal stubble; more conducive conditions in 2009 and 2015 and later in 2016, enabling metal detecting and unsystematic surface observation did not yield much in the way of chance finds of samian. The latter pattern reflects the results of the systematic fieldwalking and intensive walking of 2005 conducted by the Society.

6.1.6.6 Condition

The samian sherds are generally small/very small and have evidently been subject to prolonged processes of fragmentation. Many sherds are approaching the point where, if subject to even a small degree of further

degradation, they would be beyond recognition except by a keen trained eye. That said they show normal signs of use-wear in so far as this can be discerned from items of such size. The surfaces and fractures do not show much weathering nor particular abrasion, nor are soil environments at the site hostile to the preservation of samian ware. The denudation of the assemblage therefore seems the result of mechanical processes, probably breakage and fragmentation while lying as larger sherds on lived and traversed surfaces at the time of the occupation.

Twelve sherds of samian came from ploughsoil/topsoil deposits over the trenches and these pieces are exceptionally and universally small with an average weight of just 1.6g indicating that removal of soil by hand tools resulted in the observation of small items by the project team. The 21 sherds from stratified layers include equally tiny fragments but also several larger sherds, some unlikely to be residual. The average sherd weight for the stratified sherds was 4.8g. The latter is a very low figure by any comparison (cf. Willis 2013, table 15.5) and is a clear indicator that sherds were extensively broken, perhaps through trampling by people and animals or through deposit reworking, before many of them came to rest in the contexts from which they were recovered archaeologically. The picture seems the same across the site, trench to trench.

6.1.7 Discussion

The excavations produced a larger sample of Roman pottery than is normally the case with rural sites. The recent survey of investigations at Roman rural settlements shows the average figure from such works is c. 2250 sherds (Fulford and Brindle 2016, fig. 1.3). Accordingly, the present assemblage provides a firm basis from which to examine aspects of composition and character.

The chronological range of the Roman material from the Hatcliffe Top excavations was more limited than that evident from the other site examined and reported to date as part of the Central Wolds Research Project, at Mount Pleasant Nettleton/Rothwell (Leary 2013). With the exception of a small quantity of rock-gritted sherds there was little evidence to suggest Iron Age activity nearby. Equally, there was little material present that could be dated to the early Roman period and where present it consisted of only the most ubiquitous native tradition vessels with none of the exotica seen from Nettleton (Leary 2013, 184). Willis (Section 6.1.6) suggests that the samian items present could include long lived vessels potentially arriving after the second century as this fine ware has a recognized association with active curation resulting in vessels enjoying a long life-span. In the

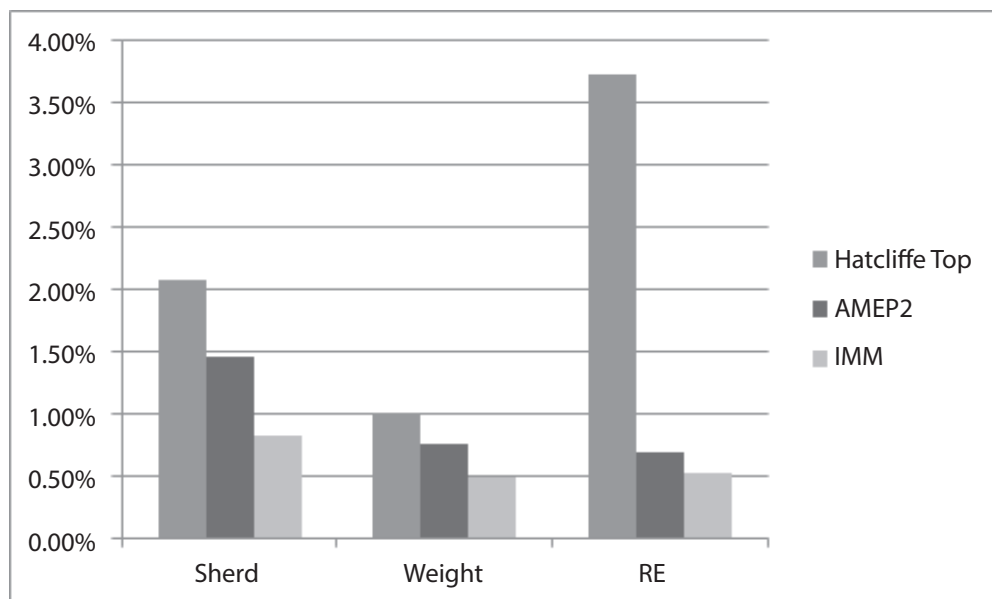


Fig. 6.6 Comparison of Fine grey wares as a percentage of the whole Roman pottery assemblages from three regional sites. (Quantities: Hatcliffe Top 60 sherds, Able UK AMEP2 179 sherds, Brocklesby Interchange (IMM) 93 sherds).

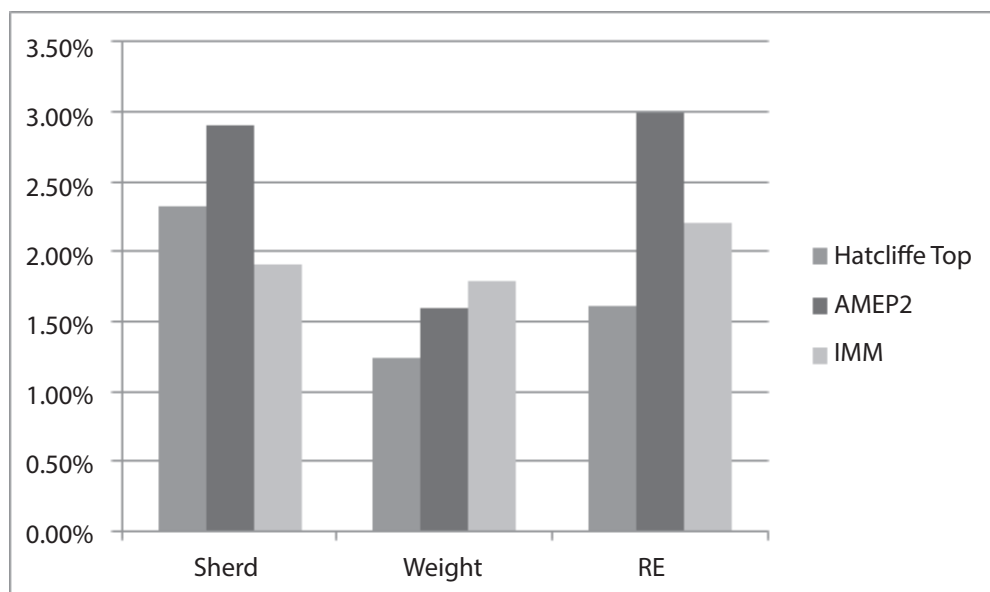


Fig. 6.7 Comparison of proportions of Nene Valley type colour coated wares as a percentage of the whole Roman pottery assemblages from three regional sites. (Quantities: Hatcliffe Top 67 sherds, Able UK AMEP2 186 sherds, Brocklesby Interchange (IMM) 80 sherds).

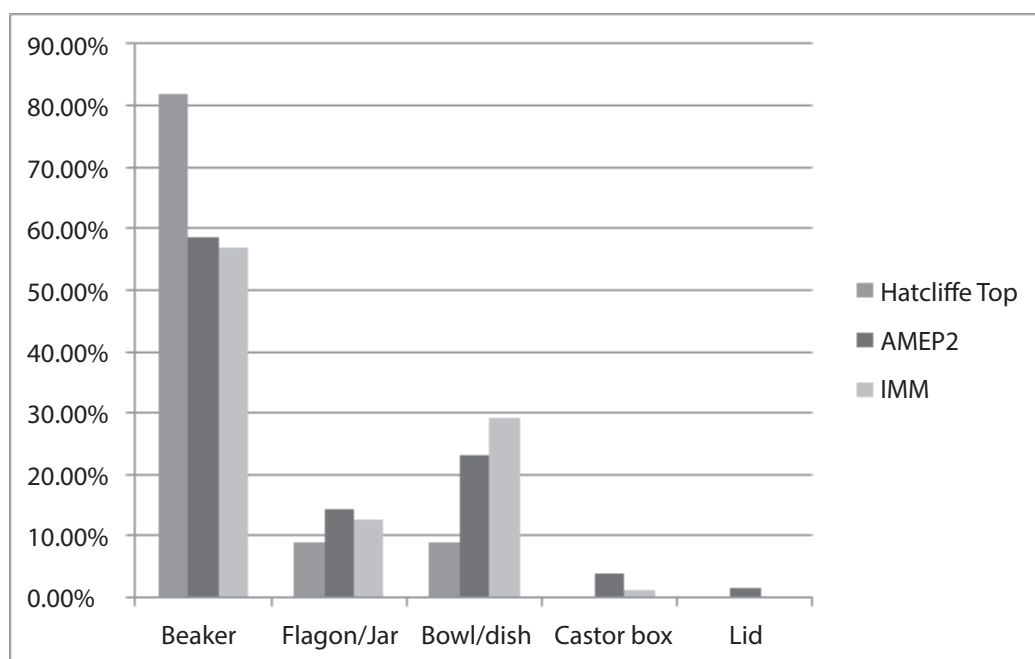


Fig. 6.8 Nene Valley type colour-coated ware by recognisable form type as a proportion of CC1-3 by sherd count at three regional sites. (Quantities: Hatcliffe Top excavated pottery total 44 sherds, Able UK AMEP2 area total 176 sherds, (Rowlandson *et al.* 2017) and Brocklesby Interchange, Immingham total 86 sherds, (Rowlandson and Fiske 2016)).

Table 6.7 Quantities and average sherd weights of Nene Valley type CC1-3 beakers etc. at three regional sites.

Site	Maximum number of vessels	Number of Sherds	Weight (g)	Average sherd weight	RE
Hatcliffe Top	65	67	198	2.96	0.28
Able UK AMEP2 site	120	186	1225	6.59	3.27
Brocklesby Interchange (IMM)	45	80	522	6.53	0.26

round it appears likely that the site at Hatcliffe Top was marginal for any settlement during this period although the small quantities of earlier pottery present do suggest some activity.

With the exception of samian (Section 6.1.6) there were few sherds that must be dated to the 2nd century AD or earlier. Although a noticeable proportion of fine grey ware vessels, some in fabrics similar to the Market Rasen Parisian wares, were recorded it is also possible that a proportion of

these vessels may date to the 3rd century AD or later (Darling and Precious 2014, 44-5) and thus contemporary with many of the Dales ware jars and grey wares from many of the contexts on the site. The distinctive suite of 2nd century AD forms commonly seen at kiln sites such as Dragonby and Roxby (Gregory 1996; Rigby and Stead 1976) and occupation sites such as Mount Pleasant (Leary 2013) and Lincoln itself (Darling and Precious 2014, 126 and 136-9) were largely absent.

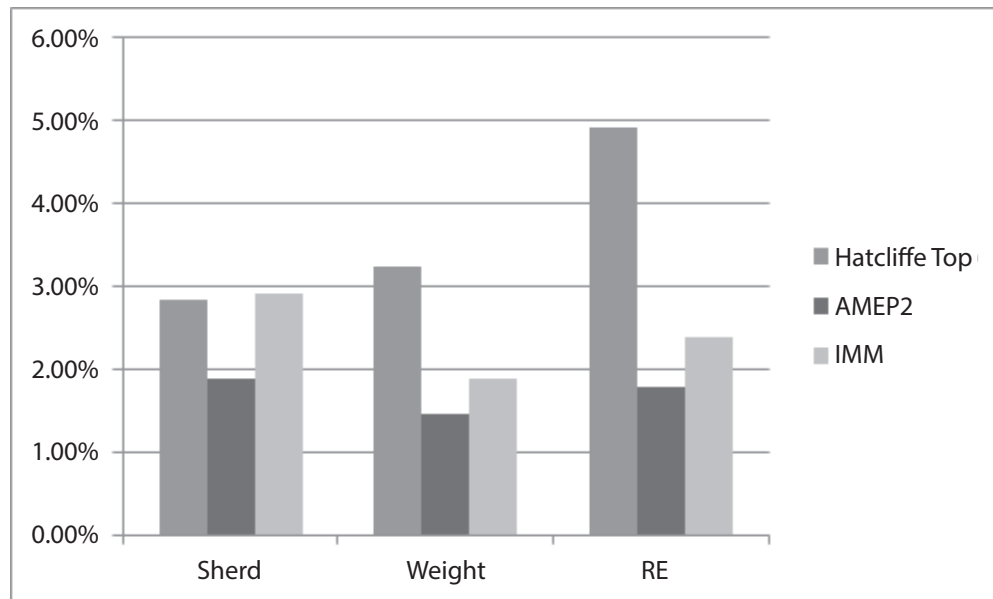


Fig. 6.9 Fabric types SPOX, SPOXT, OXB and OX1 as a proportion of whole assemblages at three regional sites. (Quantities: Hatcliffe Top 82 sherds, Able UK AMEP2 231 sherds, Brocklesby Interchange (IMM) 328 sherds).

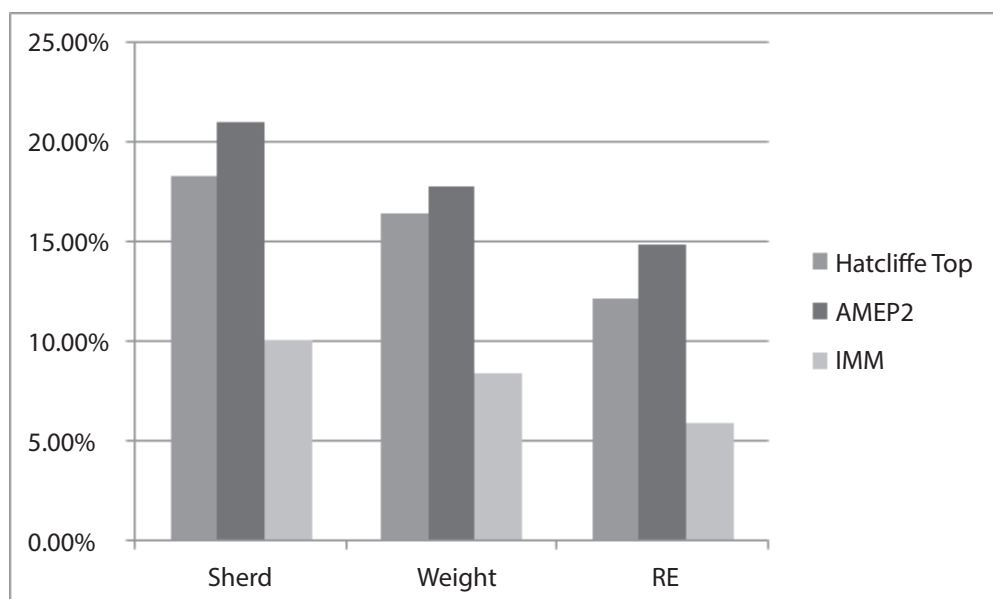


Fig. 6.10 Dales ware shell-gritted fabric as a proportion of whole assemblages at three regional sites. (Quantities: Hatcliffe Top 528 sherds, Able UK AMEP2 2555 sherds, Brocklesby Interchange (IMM) 1136 sherds (including a large number of sherds from two fragmentary vessels)).

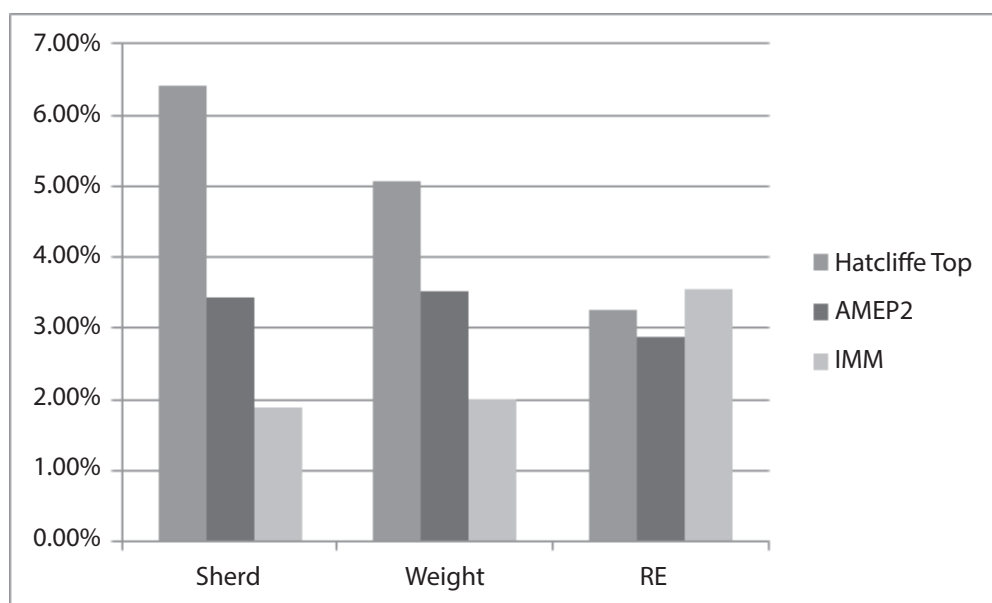


Fig. 6.11 Wheel-made late Roman shell-gritted ware as a proportion of whole assemblages at three regional sites. (Quantities: Hatcliffe Top 185 sherds, Able UK AMEP2 420 sherds, Brocklesby Interchange (IMM) 214 sherds).

From the ceramic assemblage it is difficult to recognise a specific function for the site. Larger assemblages from sites in the area have yet to move to analysis so it is difficult to remove elements of residual earlier material from these groups when trying to make comparisons. The Able UK AMEP2 site and the Brocklesby Interchange site at Immingham both have much larger assemblages including higher proportions of 2nd century AD dated items, but both also have a good proportion of late Roman, particularly 4th century, activity that can be compared with the Hatcliffe Top assemblage. By attempting a basic comparison at this stage a few points may be drawn out.

As Fig. 6.6 demonstrates there was a greater quantity of fine grey ware (GFIN, PART and MRPART) as a proportion of the whole assemblage from the Hatcliffe Top site. If one considers that the rim equivalent (RE) measurement is slightly anomalous due to the smaller sample size it would appear that there was at least double the percentage of fine grey ware from Hatcliffe Top, predominantly beakers, in comparison to the Brocklesby Interchange site and also more than at the Able UK AMEP2 site. This may be due to Hatcliffe Top being located closer to Market Rasen, probably the most prolific production site for such wares in the area, or to a chronological bias.

Nene valley type colour-coated pottery was reasonably well represented as a proportion of the assemblage on all three sites but most notably from the Hatcliffe Top assemblage (CC1-3, Fig. 6.7). Quantities of colour-coated pottery from rural sites in this part of

Lincolnshire are typically low, commonly below 3% by sherd count (e.g. Darling 2009; Leary 2013, fig. 6.33). A greater proportion of the Hatcliffe Top colour-coated assemblage was made up of beaker forms by sherd count (Fig. 6.8). This may be due to a relatively greater proportion of 3rd century AD activity on the site when beaker forms were at their most abundant. It may be that the higher proportion of colour-coated bowls or dishes in relationship to beakers on the Able UK and Brocklesby Interchange sites can be explained by a greater proportion of 4th century AD pottery present, or perhaps a difference in status or function. However, some caution ought to be exercised as taphonomic or excavation processes resulted in the colour-coated beaker sherds retrieved having an average sherd weight half as much as from the Brocklesby Interchange and Able UK AMEP2 sites (Table 6.7). It is hoped that these anomalies can be further investigated when the other sites reach analysis.

One other point of note was the relatively high proportion of Swanpool type oxidised wares from the Hatcliffe Top excavations. This may represent the bias towards pottery of 4th century AD date from the site but with further analysis of the Able UK and Brocklesby interchange assemblages by phase it will be easier to contrast the three sites. It may be that the relative lack of colour-coated bowls and dishes from the Hatcliffe Top site is due to the use of Swanpool oxidised type wares in their place.

It may be possible to discern some difference between these sites by considering the relative quantities of shell-gritted Dales ware (DWSHT) and other late Roman

wheel-thrown wares (SHEL) present. Hatcliffe Top had a high proportion of Dales ware and a particularly high proportion of wheel-made late Roman shell-gritted wares (Figs 6.10 and 6.11). This appears closer to the significant late Roman assemblage from the Able UK AMEP2 site rather than the Brocklesby interchange site which had less evidence for late Roman activity. This supports the perceived bias towards late Roman and especially pottery of 4th century AD date from Hatcliffe Top but it must be remembered that the comparative assemblages have a far higher proportion of pottery dating to the 2nd century AD or earlier. With further comparison of the material from these sites by phase it may be possible to investigate the relative percentages more closely.

The presence of small fragments of more exotic fine wares such as Central Gaulish Black ware, Oxfordshire red-slipped ware and Hadham red-slipped ware make this site similar to the coastal sites investigated at Glebe Farm, Barton upon Humber in the early 1990s (Didsbury *nd*) and the AMEP2 area from the Able UK project (Rowlandson *et al.* 2017). Finds of these types of pottery are rare on rural sites in Lincolnshire with Oxfordshire ware typically featuring only on sites which included coarse wares dating to the final period of Roman pottery production in Lincolnshire (Darling and Precious 2014; Rowlandson *in prep.* B). The quantities of Swanpool type colour-coated and oxidised table wares would also match those assemblages with occupation in the 4th century AD or later. In the absence of suitably quantified groups of this date from the known settlement focus at Kirmington it is difficult to recognise how representative this group is. It may be that the range of vessels from this site just appears unusual as it is biased by being predominantly late Roman to Final Roman in composition.

The absence of amphora can be explained by the bias towards late Roman pottery within the assemblage. Ceramic table ware was present with a somewhat higher proportion of beakers, 3.95% of the assemblage by sherd count or 6.70% by RE, which was slightly higher than the excavated assemblage from the Mount Pleasant Nettleton/Rothwell site (Leary 2013, 225, 4% by RE). Due to chronological biases it is not certain if this reflects a real difference in site function or merely a bias towards pottery from the 3rd to mid-4th century AD when colour-coated beakers would have been more widely distributed (though this explanation is probably the case).

Ceramic table ware would also have been less favoured in comparison to glass and/or metal vessels particularly towards the end of the Roman period (Cool 2006, chapter 19; Neal 1996). A site excavated at Navenby, on Ermine Street south of Lincoln,

with a trend towards drinking and feasting showed evidence for a significant proportion of glass vessels as well as colour-coated wares, Swanpool oxidised ware and Oxfordshire red-slipped wares (Glover 2015; Rowlandson with Bird *et al.* 2015). During this Final Roman period the presence of glassware, rather than a small number of sherds of ceramic table ware sherds from more disparate sources, ought to be looked at to recognise 'high status' sites. It would appear that the proportion of beakers does suggest an atypical rural site but analysis of further groups will be required to put this assemblage properly into context.

Examples of specialist cheese presses, strainers and mortaria were all present suggesting a range of food preparation activities were taking place using ceramic vessels. Well preserved fragments from cheese presses from the Brocklesby Interchange near Immingham have prompted the investigation as to the possibility of specialist dairy production, perhaps inspired by arguments presented for other Roman sites in the east of England (e.g. Jackson and Potter 1996). However, cheese presses were made by a number of the local pottery industries (see Samuels 1983) and they appear to have made up only a small proportion of any of the Roman pottery assemblages in the area (Rowlandson and Fiske 2016; Rowlandson *et al.* 2017; Didsbury *forthcoming*). A preliminary comparison with the quantities of cheese presses and strainers from this site did not show a noticeable difference between this site and the Able UK AMEP2 and Brocklesby interchange assemblages in the proportion of such vessels present. Analysis of lipid remains on the assemblage from the Brocklesby Interchange may help to provide evidence of dairy fats and thus possible cheese making but as it was perfectly possible to manufacture cheese without the aid of specialist ceramic vessels it may not be possible to recognise specialisation in dairy production on the basis of the ceramic assemblage alone.

It was noticeable that the whole assemblage was more fragmentary than those from recent projects at Immingham and the Able UK project (Rowlandson and Fiske 2016; Rowlandson *et al.* 2017). This may be due to a difference in excavation methodology, sampling and retention policies between the sites as it is clear that research excavations have generally sought to excavate and record in greater detail (Willis 2013, 380). Equally the Hatcliffe Top assemblage may be more fragmentary due to being more marginal during the focus of occupation in the Roman period and subjected to a more damaging trample and/or ploughing regimes subsequently over centuries. Patterns of deposition or other taphonomic processes on the hillside site at Hatcliffe Top may also have been different to lower lying sites at Immingham, North Killingholme and

Barton upon Humber. The strong evidence for Saxon and/or middle Saxon activity on the Hatcliffe Top site raises the possibility that the low sherd weights may be in part due to sherds being abraded on the surface and then redeposited in post-Roman features (e.g. the medieval plough furrows of the rig and furrow cultivation across the site). Evidence from Final Roman occupation at the roadside town of Navenby showed a decrease in average sherd weight from deposits towards the end of the structural sequence when it appeared that the inhabitants continued to occupy the site but with little or no new Roman pottery being acquired (Rowlandson with Bird *et al.* 2015). As further research is brought through to publication from the Wold sites and the coastal area it may become possible to better calibrate what a 'normal' assemblage would look like (Willis 2013, 380). The ongoing research projects into this area of the Lincolnshire Wolds are vital to help archaeologists working in the area to recognise the significance of the results from some of the recent and ongoing large scale infrastructure projects undertaken by the commercial sector, prominent recently on the Humber bank area north of Grimsby.

6.1.8 The Significance of the Roman Pottery Assemblage

This is a highly significant site for understanding the end of the Roman period in northern Lincolnshire, particularly for the Lincolnshire Wolds area where published comparative sites are rare (Willis 2013). This site provides a good comparison for the growing number of sites that have been investigated to the north of modern-day Grimsby. It also offers a tantalising glimpse at a site that was possibly occupied both in the Roman and the Saxon and/or middle Saxon periods. It represents a key site for the discussion of the end of the Roman period and what may have happened to the inhabitants of Lincolnshire in the 5th century AD.

6.2 The Post-Roman Pottery

Jane Young

6.2.1 Introduction

A small assemblage of post-Roman pottery recovered during fieldwalking and excavations at Hatcliffe Top was submitted to the author for reporting. This collection comprises 196 sherds (1413 grams)

of identifiable post-Roman pottery, representing no more than 164 vessels, plus five sherds of indeterminate date. The earliest identifiable pottery dates to the Anglo-Saxon period between the 5th and 8th centuries. No decorated sherds occur but two vessels point towards some activity during the Early Saxon period. The presence of Middle Saxon pottery suggests occupation either on, or in the immediate vicinity of the site between the 8th and mid-9th centuries. Three vessels are dateable directly to the first half of the 8th century and a further seven vessels are of 8th century date. The pottery suggests that little post-Middle Saxon occupation occurred in the locality of the site (Table 6.8), although this may just be a reflection of a change in rubbish disposal practice. Two sherds are of Late Saxon type with the presence of a shell-tempered small jar in an early Lincolnshire fabric (LSLOC Fabric D) suggesting some local presence from the late 9th to early 10th centuries, whereas the other Torksey ware sherd is of late 10th to mid-11th century type. Two sherds are of 11th or 12th century date. Scant Medieval, post-Medieval and Early Modern material was forthcoming.

6.2.2 Methodology and Terminology

The pottery was catalogued by ware (common name) and fabric type using mnemonic codenames (Table 6.9). Post-Medieval and Early Modern types were identified visually; earlier fabrics were identified using a x20 binocular microscope. The assemblage was quantified within each context by ware and where given fabric type, with three measures: number of sherds, estimated vessel count using sherds obviously belonging to a single vessel and weight. Estimated vessel equivalence by percentage of rim present (REVE) was not considered suitable for the assemblage as few rim diameters could be accurately measured. Every effort was made to reconstruct cross-context vessels but only one was identified despite rigorous efforts to cross-match sherds. The ceramic data including attributes such as decoration, condition and usage was entered on a Microsoft Access Database using ceramic codenames and a copy of this is available in the Project archive. Recording of the assemblage was in accordance with the guidelines laid out in Slowikowski *et al.* (2001) and the joint guidelines of the three period specialist Study Groups (the Prehistoric Ceramics Research Group, the Study Group for Roman Pottery and the Medieval Pottery Research Group (2016)). Where possible vessel form was recorded using the Medieval Pottery Research

Group's guide to the classification of forms (MPRG 2001), although amongst the Saxon material few form types were readily identifiable.

The pottery types are summarized in Tables 6.8 and 6.9 by ceramic period with individual fabric descriptions available in the archive. Twenty four different local and regional ware types and four miscellaneous vessels are present.

6.2.3 Anglo-Saxon Pottery

A group of 106 sherds representing 93 vessels are of handmade Anglo-Saxon type. The assemblage is highly fragmentary with few diagnostic sherds occurring. The difficulties of dating and classifying Saxon pottery have been discussed in detail by several authors and are not repeated here (cf. Myres 1969; 1977; Hamerow 1987; Laidlaw and Mephram 1999). Such vessels could be of early Anglo-Saxon date and evidence for 5th to 7th century occupation in the area, or they might have been produced in the later 7th or 8th centuries in continuation of earlier traditions. It is clear from excavations at several Lincolnshire sites including Flixborough (Young and Vince 2009) that handmade mainly quartz-tempered fabrics did continue to be used in Lincolnshire into the later 7th and 8th centuries, although they are usually only a minor element of any assemblage. A basic introduction to the fabrics is outlined below.

Six main classes of fabric were identified (Table 6.9). The definitions of these classes are discussed in outline below, but for a more detailed description of

the types see Perry (forthcoming). These classes are based on work undertaken during the East Midland Anglo-Saxon Pottery Project (Vince and Young 1991) and the Northumbrian Kingdom Anglo-Saxon Pottery survey (Vince 2010). The same classification is used for this site but this does not imply that the same clays are used in each area.

Acid Igneous Rock Group (CHARNT)

Fabrics in this class are characterised by grains of Acid Igneous rock. They are superficially similar to fabrics produced in the Charnwood Forest area of Leicestershire but most examples found on this site are probably of more local origin (Ixer and Vince 2009). This was the most common type of handmade pottery to be recovered from Hatcliffe Top. The 33 undecorated vessels recovered from this site can be divided into two groups. The most common group comprises 30 vessels in fabrics that although containing fragments of Acid Igneous rock also include a wide range of other inclusions. It is this group that is most likely to be of fairly local origin. The high carbonised vegetal content of the fabric of many of these vessels may indicate a late date, but could just represent a local preference. The assemblage is fragmentary and most sherds are too small to identify vessel form, although at least four jars and two bowls are present in the group. Finishing of most vessels has left them with a fairly smooth surface, but only one vessel actually has burnished surfaces. The three rims occurring are of simple rounded type. A few vessels have external soot residues and two have internal carbonised deposits.

Only three very fragmentary sherds have fabrics that almost entirely contain fragments of Acid Igneous rock. Visually the fabric of these vessels is similar to actual vessels manufactured in the Charnwood Forest area (Ixer and Vince 2009). No forms can be identified although it is probable that the sherds came from jars or bowls.

Local Anglo-Saxon Fabrics (ESAXLOC)

This class encompasses sherds in sandy fabrics that mainly contain locally available quartz sands. Twenty seven sherds representing twenty four vessels in eight site-based fabrics were recovered from the site.

The five fragmentary sherds in Site Fabric Group 1 are in fabrics including abundant fine quartz grains of mainly below 0.2mm and have sparse to moderate flattened carbonised vegetal voids. No form types were discernible but one sherd has an external burnished surface.

Table 6.8 Post-Roman Pottery summarized by ceramic period, with vessel count

Ceramic period	Total sherds	Total vessels
Anglo-Saxon (5th to 8th century)	106	93
Middle Saxon (8th to mid-9th century)	59	40
Late Saxon (mid/late 9th to mid-11th century)	2	2
Saxo-Norman (11th to 12th century)	2	2
Medieval (13th to 15th century)	8	8
Post-Medieval (16th to 18th century)	8	7
Early Modern (late 18th to 20th century)	11	11
Miscellaneous	5	4
Totals	201	167

Table 6.9 Post-Roman Pottery summarized by codename, with sherd and vessel count.

Codename	Full name	Earliest suggested date	Latest suggested date	Total sherds	Total vessels	Total weight in grams
BEVO2	Beverley Orange ware Fabric 2	1230	1350	1	1	1
BL	Black-glazed wares	1550	1750	4	4	23
CHARNT	Charnwood-type ware	450	800	43	33	159
ECHAF	Early to mid-Anglo-Saxon chaff-tempered ware	450	800	1	1	3
ENGS	Unspecified English Stoneware	1750	1900	1	1	10
ERRA	Erratic rock tempered	450	800	21	21	119
ESAXLOC	Early Anglo-Saxon Local wares	450	650	27	24	98
ESGS	Early to mid-Anglo-Saxon Greensand quartz tempered	550	800	9	9	44
HUM	Humberware	1250	1550	3	3	50
LERTH	Late earthenwares	1750	1900	2	2	7
LFS	Lincolnshire Fine-shelled ware	970	1200	1	1	8
LSLOC	Late Saxon Local Fabrics	850	1050	1	1	10
MAX	Northern Maxey-type ware	680	870	41	32	416
MEDLOC	Medieval local fabrics	1150	1450	3	3	15
MISC	Unidentified types	400	1900	5	4	64
MSAXLOC	Local middle Saxon fabrics	700	850	18	8	299
NELCQ	North East Lincolnshire Quartz and Chalk-tempered	1050	1230	1	1	11
PEARL	Pearlware	1770	1900	1	1	1
SLIP	Unidentified slipware	1650	1750	3	2	8
SST	Early to mid-Saxon sandstone-tempered	550	800	5	5	19
TB	Toynton/Bolingbroke wares	1450	1750	1	1	21
TORK	Torksey ware	850	1100	1	1	6
TOY	Toynton Medieval Ware	1250	1450	1	1	11
TPW	Transfer printed ware	1770	1900	5	5	5
WHITE	Modern whiteware	1850	1900	2	2	5

Vessels in Fabric Group 2 were the most common type to be found with 13 sherds representing 10 vessels. This fabric has abundant fine quartz grains, occasional larger rounded grains including Greensand quartzes and moderate flattened carbonised vegetal voids. At least one necked jar and a bowl are present in the group. The only rim present is of a simple rounded type and one sherd has external burnishing.

A single tiny sherd is from a small vessel in Fabric Group 3. The fabric contains common mainly mixed rounded quartz grains and moderate rounded calcareous grains that are probably chalk.

Two sherds from jars or bowls in Site Fabric Group 4 have fabrics that contain common mixed quartz grains, sparse flint fragments and sparse calcareous grains. One piece additionally has common carbonised vegetal voids.

Two minute sherds belong to Fabric Group 5. This fabric includes common, mainly coarse rounded quartz grains, occasional flint fragments and some flattened carbonised vegetal voids.

Calcareous Fabric Group 6 contains abundant fine calcareous grains and variable rounded quartz grains. The two sherds include a simple rounded rim from a jar or bowl.

Fabric Groups 7 and 8 each comprised single sherds. The sherd in Fabric 7 is the simple rounded rim of a jar or bowl in a fabric containing abundant fine quartz grains and common fine crushed fossil shell. The minute very abraded piece in Fabric 8 has a fabric including abundant mainly fine subangular to subround quartz grains, quartzite grains and occasional flint fragments.

Table 6.10 Anglo-Saxon handmade Pottery summarized by ware type, with vessel count.

Ware Type	Total sherds	Total vessels
CHARNT	43	33
ECHAF	1	1
ERRA	21	21
ESAXLOC	27	24
ESGS	9	9
SST	5	5
Anglo-Saxon (5th to 8th)	106	93

Table 6.11 Middle Saxon Pottery summarized by ware type with vessel count.

Ware Type	Total sherds	Total vessels
MAX	41	32
MSAXLOC	18	8
Middle Saxon (8th to mid-9th)	59	40

Erratic Rock Group (ERRA)

Vessels in this group are characterised by the presence of a variable range of erratic rock inclusions. The twenty one vessels found on the site have not been subdivided into sub-fabric groups as most of the sherds are too fragmentary. Five vessels have fabrics with a high carbonised vegetal content. The only identifiable forms are a small necked jar with a simple slightly everted rounded rim in a fabric containing common muscovite and granitic grains and a necked jar (Fig. 6.12 Dr 2) in a fabric containing common coarse quartz grains, some aggregated coarse sandstone, some carbonised vegetal voids and rare Acid Igneous rock fragments. The larger illustrated jar is most likely to be of Early Saxon date, but the other jar could date to anywhere between the 5th and 8th centuries.

Greensand Quartz Group (ESGS)

This group includes nine sherds with fabrics containing a high proportion of Greensand quartz (a well-rounded quartzose sand derived from the lower Cretaceous rocks that outcrop along the western and southern flanks of the Lincolnshire Wolds). The sherds come from a range of vessels of small to large size. The only identifiable form is a bowl with a simple rounded rim. Another similar rim is from a large jar or bowl. One sherd has shallow horizontal burnished grooves, possibly from the neck of a small jar or bowl of 5th to 6th century date.

Sandstone Group (SST)

Five sherds have fabrics containing quartz grains derived from sandstones. None of the fabrics are identical to any other in the group and aggregated quartz size ranges from fine to coarse. All of the sherds are fragmentary and could come from jars or bowls.

Vegetal-tempered Group (ECHAF)

A single tiny sherd from a small jar or bowl is predominantly tempered with (now) carbonised vegetal matter. The presence of flattened voids suggests the use of grass or dung. No voids are suggestive of the use of chaff grains.

6.2.4 Middle Saxon Pottery

A group of 59 shell-tempered middle Saxon sherds representing 40 vessels was recovered from the site. The material was in a slightly less fragmentary condition than that of the handmade Anglo-Saxon pottery with some vessels being represented by more than a single sherd. Forty one sherds from thirty two vessels are of Northern Maxey type (MAX). Nine different sub-fabrics are identifiable in the group, but most vessels are in the common Fabric B. The 32 Fabric B vessels include both bowls (Fig. 6.12 Dr 1) and jars but most sherds can only be identified as coming from jars or bowls of tiny to large size. The two identifiable bowls have everted rims but the other three rims are of the typical flat-topped 8th century type and could come from jars or bowls. One sherd is the neck of a tiny jar possibly intended for use as a cup. Seven sherds are from two large vessels in the coarser Fabric C. One of these vessels is a large lugged jar with an upright rounded lug (Fig. 6.12 Dr 3) and a flat-topped rim. The rim and cylindrical shape of the jar suggest an early to mid-8th century date for the vessel. A single flat-topped rim sherd from a lugged jar or bowl is in coarse Fabric G. The other seven sherds are in unclassified fabrics (Fabric Group U) although four of these vessels can be paralleled with vessels found at Flixborough (Young and Vince 2009, 353-4). A small un-diagnostic sherd is in abundantly fine-shelled Fabric U.1 thought to date to between the early and mid-8th century. The external surface of this usually low-fired fabric appears to have been brushed. The top of a rounded upright lug from a large jar or bowl is in Fabric U.2. This high-fired fabric contains abundant fine fossil shell that has begun to decompose due to a too high firing temperature. This type is also thought to date

to between the early and mid-8th century. Two sherds are in vessels in fine-shelled Fabric U.4. This fabric is thought to be an 8th century predecessor to the later Early Fine-shelled ware. The other three sherds are in fabrics not previously classified. Two rims are of everted and wedge shape whilst the other sherd is from a rounded upright lug. These vessels can only be dated to between the 8th and mid-9th centuries.

Eighteen shell-tempered sherds from eight vessels are of middle Saxon date but are not part of the Maxey ware tradition. These vessels (MSAXLOC) contain moderate to common variable fossil shell and forms are similar to the quartz-tempered Anglo-Saxon handmade vessels. Five vessels from this site have been grouped together to form a new fabric (Fabric H). These vessels are small or large-sized jars or bowls of 8th to mid-9th century date. Ten sherds in this fabric form a single small thin-walled jar or bowl with a flat base. The three un-attributed sherds come from two large vessels and an unknown form of 8th to mid-9th century date.

Table 6.12 Late Saxon Pottery summarized by ware type, with vessel count.

Ware Type	Total sherds	Total vessels
LSLOC	1	1
TORK	1	1
Late Saxon (mid/late 9th to mid-11th)	2	2

Table 6.13 Saxo-Norman Pottery summarized by ware type with vessel count.

Ware Type	Total sherds	Total vessels
LFS	1	1
NELCQ	1	1
Saxo-Norman (11th to 12th)	2	2

Table: 6.14 Medieval Pottery summarized by ware type, with vessel count.

Ware Type	Total sherds	Total vessels
BEVO2	1	1
HUM	3	3
MEDLOC	3	3
TOY	1	1
Medieval (13th to 15th)	8	8

6.2.5 Late Saxon Pottery

Two sherds are of mid/late 9th to mid-11th century Late Saxon or Anglo-Scandinavian type. A probably wheel-thrown shell-tempered jar is possibly of Lincoln manufacture (LSLOC Fabric D). This fabric is usually confined to mid/late 9th to early 10th century deposits in Lincoln (Young *et al.* 2005, 67-9). The other sherd is from a Torksey-type jar (TORK). The jar has a fabric consistent with an actual Torksey source (Barley 1964; 1981; Perry 2016). The late rim type suggests a late 10th to mid-11th century date.

6.2.6 Saxo-Norman Pottery

Two sherds in long lived pottery types are of Saxo-Norman type. A small jar is in Lincolnshire Fine-shelled ware (LFS). The ware is the main Saxo-Norman pottery type found in north and central Lincolnshire in deposits dating to the mid-11th to 12th centuries, but is found as early as the late 10th century (Young *et al.* 2005). This small jar is, however, chronologically undiagnostic and can only be dated to between the 11th and 12th centuries. A small sherd from a jar in reduced quartz and chalk-tempered fabric is in a newly defined ware type (NELCQ). This ware is likely to have a similar period of production to that of the Lincolnshire Fine-shelled ware.

6.2.7 Medieval Pottery

Eight of the recovered sherds are of Medieval type. The vessels are in two regionally imported ware types (BEVO2 and HUM), the Medieval Toynton-type ware (TOY) and three undefined local fabrics (MEDLOC). A Medieval Toynton-type jug sherd is of late 13th to 15th century date. The Beverley 2 sherd in Fabric B (BEVO2) comes from a jug of 13th to early/mid-14th century date (Didsbury and Watkins 1992). Three Humberware sherds (HUM) are all of the type defined as Humber 1 (Watkins 1987, 98-104). They come from two jugs and a jug or a jar of late 13th to mid-16th century date. Two externally amber-glazed sherds are from quartz-tempered jugs of 13th to 14th century date whilst an internally amber-glazed rounded rim is from a jar or bowl of 13th to 15th century date. All three vessels have fabrics that suggest a fairly local origin.

6.2.8 Post-Medieval to Early Modern Pottery

Seven vessels are of post-Medieval type and a further eleven sherds are from industrially produced vessels of Early Modern date. A post-Medieval Toynton/Bolingbroke (TB) is from a large internally and externally glazed bowl of 16th to mid-17th century date. The four Black-glazed Earthenware sherds (BL) are of differing types and dates. The two mid-17th to 18th century sherds comprise a Staffordshire/Derbyshire-type cup and a drinking vessel in a fine orange sandy fabric that might have been produced within Lincolnshire. A sherd from a jar is of 18th or 19th century date whilst a minute flake can only be dated to between the 17th and 19th centuries. Three sherds come from two Slipware vessels (SLIP). Two sherds are from a 18th to 19th century bowl with an internal yellow glaze over a thick white slip. The glaze is mottled with manganese suggesting a Yorkshire or Sunderland source. A minute sherd with an internal white slip can only be dated to between the 18th and mid-20th centuries.

The eleven Early Modern sherds include Pearlware (PEARL), plain (WHITE) and transfer-printed (TPW) white earthenwares, late earthenwares (LERTH) and English stonewares (ENGs).

6.2.9 Incidence of the Post-Roman Pottery by Trench and Context

The post-Roman pottery was recovered from fifty one contexts and NELALHS (local society) fieldwalking (Table 9). The largest groups of post-Roman pottery were recovered from Trenches D, A and B with each of these trenches producing a significant number of Anglo-Saxon and middle Saxon sherds.

Trench A

Fifty nine sherds representing thirty eight vessels were recovered from fifteen deposits in Trench A. Much of the pottery is in an abraded to heavily abraded state with sherds weighing no more than 20grams, although some larger fresher sherds of middle Saxon date are present. All but three of the recovered vessels are of handmade Anglo-Saxon or Middle Saxon type.

From A Phase 2C

A single tiny rounded rim sherd from a jar or bowl in an Erratic-tempered fabric recovered from fill (1031) of ditch [1068] is of 5th to 8th century date. This may have been introduced to this context by medieval

ploughing given that the north-eastern edge of this context lay next to the furrow cut [1070] (pers. comm. S. Willis).

From A Phase 2

Nine sherds from five vessels of handmade Anglo-Saxon and Middle Saxon type were recovered from two features assigned to this phase. Seven Northern Maxey-type sherds from three vessels and a handmade Charnwood-type sherd were recovered from the fill of flue [1028] being fill (1027) alongside Roman pottery sherds. Two of the vessels in Fabric B can only be dated generally to between the 8th and mid-9th centuries but the other vessel is a large cylindrical lugged jar in Fabric C (Fig. 6.12 no.3) dating to the first half of the 8th century. This vessel has a conjoin to a sherd from (1014) filling the scoops [1021], lying a short distance to the north-east of [1028]. A tiny sherd from a small Charnwood-type jar of 5th to 8th century date was recovered from stakehole [1026], fill (1025).

From A Phase 2 or 3

Six sherds representing three vessels were recovered from the fill (1014) in scoops [1021]. Three sherds are from two Charnwood-type vessels of 5th to 8th century date whilst the other two sherds recovered from this feature are from the large Northern Maxey-type lugged jar (Drawing 03), sherds of which were also found in the fill of flue [1028] (cf. above).

From Medieval Furrows

Five sherds representing four vessels were recovered from the furrow cut [1070] fill (1069) at the extreme eastern end of the trench. The vessels comprise two handmade Anglo-Saxon jars or bowls in local quartz (ESAXLOC) and erratic-tempered (ERRA) fabrics and two Middle Saxon Maxey-type vessels. The handmade Anglo-Saxon sherds can only be dated to between the 5th and 8th centuries but the Middle Saxon Northern Maxey-type (MAX) sherds can be dated more closely. The jar or bowl in Fabric U.1 can be paralleled at Flixborough (Young and Vince 2009, 353-4) with vessels of probable early to mid-8th century date. The other jar or bowl in Fabric B is of 8th to mid-9th century date.

From the fill (1003) of furrow cut [1076] a group of 22 sherds was collected representing 11 vessels of mainly Middle Saxon type. Three sherds are from vessels of handmade Anglo-Saxon type in Charnwood-type, Erratic and local quartz-tempered fabrics. Three of the Middle Saxon shell-tempered vessels are jars or bowls in Northern Maxey-type fabrics. Two sherds

come from a large 8th to mid-9th century jar or bowl in Fabric B. A similar vessel in Fabric U.4 can be dated more closely to within the 8th century. The other sherd comes from a large lugged vessel in Fabric U.2. The use of this fabric is thought to be confined to the first half of the 8th century. Five vessels are in newly defined local (MSAXLOC) Fabric H. This fabric must fall within the 8th to mid-9th century Middle Saxon date range but until more examples in securely dated deposits are found it is not possible to be more precise. Ten of the sherds come from a single thin-walled jar or bowl with a flat base. Three other sherds come from two small vessels whilst the other two sherds in this fabric are from large jars or bowls. The assemblage is too small to be certain of deposition date but if the sherds are contemporary it could suggest a date in the first half of the 8th century for the activity represented.

From Modern Ploughsoil and base of Modern Ploughsoil over Archaeology

The remaining sherds from this trench were either recovered from the modern ploughsoil (1001) or cleaning at the base of the ploughsoil over features (1022/1040). With the exception of a Saxo-Norman jar in a quartz and chalk-tempered fabric (NELQC), a 19th to mid-20th century stoneware bottle and a tiny miscellaneous scrap all of the pottery is of Anglo-Saxon or Middle Saxon type.

Trench B

Forty one sherds representing thirty three vessels were recovered from Trench B. The assemblage is mainly in an abraded to very abraded state with sherds weighing no more than 11grams.

From B Phase 1

Two small sherds recovered from gullies [2030] and [2039], fills (2029) and (2038) respectively, are of post-Roman date. The sherd from gully [2030] is from a Northern Maxey-type vessel in 8th century Fabric U.4. The sherd from gully [2039] is minute and comes from a Charnwood-type vessel of 5th to 8th century date. Given that these sherds are so small and that they come from contexts dominated by Roman sherds the likelihood is that they are intrusive (pers. comm. S. Wills).

From B Phase 2

Ten sherds from three vessels were recovered from the fills of two features in this phase. The fills (2014) and (2017) in ditch [2006] each produced one small sherd

of Charnwood-type pottery of 5th to 8th century date, perhaps introduced by the adjacent feature [2007]/[2020] which cut this ditch (see below). Eight sherds from a single Charnwood-type vessel of similar date were recovered from feature fill (2040) of ditch [2034]/[2041].

From Phase 3

Fifteen sherds, each representing a separate vessel, were recovered from four features in Phase 3. Gully cut [2007]/[2020] fills (2003) and (2004) produced four sherds of handmade 5th to 8th century Anglo-Saxon pottery from jars or bowls of small to large size. Two of the vessels are in Erratic-tempered fabrics, one is of Charnwood-type and one is in a local quartz sand-tempered fabric (ESAXLOC). Three sherds of handmade 5th to 8th century Anglo-Saxon pottery and a tiny rim sherd of Roman or Medieval date (MISC) were recovered from gully [2009], fill (2018). The Anglo-Saxon sherds are of Sandstone-tempered, Erratic-tempered and local quartz-tempered type. This feature also produced six sherds of handmade Anglo-Saxon pottery from its upper fill (2002). Five of these sherds are minute pieces in Charnwood-type ware whilst the other sherd comes from an Erratic-tempered necked jar (Drawing 2) of 5th to 7th century type. A single tiny abraded sherd in a Charnwood-type Fabric was recovered from scoop [2013], fill (2012).

From Modern Topsoil

The remaining sherds from this trench were recovered from modern topsoil: contexts (2001), (2005) being cleaning at the base of the topsoil, (2026) and (2031). The material is mainly comprised of Anglo-Saxon handmade types and Middle Saxon Northern Maxey-type ware fabrics, but sherds of post-Medieval and Early Modern date were also recovered.

Trench B or C

A single abraded jug sherd in a local quartz-tempered fabric was recovered from the 2008 season spoilheap, comprising soils from Trenches B and C, in 2009, context (2035). The jug is of 13th or 14th century date.

Trench C

Sixty sherds representing fifty six vessels were recovered from nine deposits and modern ploughsoils. Most of the pottery comes from post-Roman deposits. The material is in a mixed condition with less abrasion than that of pottery found in the other trenches. Sherds mainly weigh less than 10 grams, although

some larger Medieval and post-Medieval sherds occur. Steven Willis writes: Of note is the incidence of sherds from six Medieval vessels from contexts lying very close to the Hatcliffe Road immediately by the field hedge: a Toynton ware vessel from (3551) (thought likely to be intrusion in that context) and a LSLOC jar from later soil, (3554), by (3551), and two Humberware vessels and a Torksey ware jar from (3000) in the 2010 season, together suggesting an association with this road, perhaps as early roadside litter (see details below).

From the Later Linear feature Group at C (Late Roman)

Fill (3004) of gully cut [3027] produced two small sherds from jars or bowls in local handmade Anglo-Saxon quartz-tempered fabrics (ESAXLOC) of 5th to 8th century date. (This feature is thought to be of Late Roman date; it may be significant that the Medieval furrow cut [3022] lies just to the north-east of this feature (S. Willis, pers. comm.)).

From C Phase 1

Two Erratic-tempered handmade Anglo-Saxon sherds from jars or bowls of 5th to 8th century date were recovered from flue fill (3041) in [3019]/[3050] of this phase.

From C Phase 3

Sherds from one or two post-Roman vessels were recovered from the fills of oven [3752]/[3751]. The mixed fill of flue [3751], context (3726), produced a single unidentifiable greyware sherd from a large bowl of Roman or Late Saxon date. Four sherds from a single vessel in a local quartz-tempered Anglo-Saxon fabric were recovered from the silt wash fill (3703) of the stoke pit [3752].

The fill of Oven (3552), namely (3551), produced a sherd from a Medieval Toynton ware jug of late 13th to 15th century date.

From Medieval Furrows, Topsoil and Ploughsoil contexts

Most of the post-Roman pottery recovered from this trench was found in topsoil/modern ploughsoil contexts, namely (3000), (3001), (3003), (3005) (3554) and (3700) or fills of Medieval cultivation furrows [3716] and [3720]. The group of pottery recovered from the topsoil/modern ploughsoil and

Medieval furrows includes a range of handmade Anglo-Saxon vessels in several ware types. Of note is the presence of nine vessels in local quartz-tempered fabrics (ESAXLOC). One sherd has a burnished external surface whilst another has a semi-burnished surface. Eight of the vessels are of shell-tempered Northern Maxey or local Middle Saxon type. Sherds specifically from the topsoil/modern ploughsoil (3000) included two sherds from Humberware jugs or jars of late 13th to mid-16th century date and a sherd from a late 10th to mid-11th century Torksey ware jar. Odd sherds of Medieval, post-Medieval and Early Modern date were also recovered. A rim sherd from a shell-tempered jar (LSLOC) of late 9th to early 10th century date was recovered from the area around oven (3552), layer (3554), which lay to its north-west side and partly over the oven.

Trench D

Twenty one sherds representing twenty vessels were recovered from four deposits and modern ploughsoils at this location. The pottery is mainly in a slightly abraded to abraded condition with sherds weighing between 1 gram and 34 grams. Most sherds come from the ploughsoil (4000).

From D Phase 2

A single simple rounded rim sherd from a bowl in a local handmade Anglo-Saxon fabric was recovered from stoke pit [4062] fill (4019). The bowl can only be dated to between the 5th and 8th centuries. This may be an intrusive item or represent an inclusion via sediment sinkage at the top of the feature fill (pers. comm. S. Willis).

Table 6.15 Post-Medieval and Early Modern Pottery summarized by ware type, with vessel count.

Ware Type	Total sherds	Total vessels
BL	4	4
SLIP	3	2
TB	1	1
Post-Medieval (16th to 18th)	8	7
ENGs	1	1
LERTH	2	2
PEARL	1	1
TPW	5	5
WHITE	2	2
Early Modern (late 18th to 20th)	11	11

Table 6.16 Post-Roman pottery summarized by ceramic period within trenches, with vessel count.

Trench:	A	B or C	B	C	D	E	Field-walking	Field Surface collected	Totals
Ware and Period									
CHARNT	9	0	13	5	5	0	1	0	33
ECHAF	1	0	0	0	0	0	0	0	1
ERRA	3	0	5	7	2	3	0	1	21
ESAXLOC	3	0	3	13	4	1	0	0	24
ESGS	1	0	0	4	2	1	1	0	9
SST	0	0	4	0	1	0	0	0	5
Anglo-Saxon	17	0	25	29	14	5	2	1	93
MAX	12	0	5	6	3	1	3	2	32
MSAXLOC	6	0	0	2	0	0	0	0	8
Middle Saxon	18	0	5	8	3	1	3	2	40
LSLOC	0	0	0	1	0	0	0	0	1
TORK	0	1	0	1	0	0	0	0	2
Late Saxon	0	1	0	2	0	0	0	0	3
LFS	0	0	0	1	0	0	0	0	1
NELCQ	1	0	0	0	0	0	0	0	1
Saxo-Norman	1	0	0	1	0	0	0	0	2
BEVO2	0	0	0	1	0	0	0	0	1
HUM	0	2	0	3	0	0	0	0	5
MEDLOC	0	0	0	1	0	0	0	1	2
TOY	0	0	0	1	0	0	0	0	1
Medieval	0	2	0	6	0	0	0	1	9
BL	0	0	0	2	1	0	0	1	4
SLIP	0	0	1	0	0	1	0	0	2
TB	0	0	0	1	0	0	0	0	1
Post-Medieval	0	0	1	3	1	1	0	1	7
ENGS	1	0	0	0	0	0	0	0	1
LERTH	0	0	0	1	1	0	0	0	2
PEARL	0	0	0	0	0	1	0	0	1
TPW	0	0	1	4	0	0	0	0	5
WHITE	0	0	0	1	0	1	0	0	2
Early Modern	1	0	1	6	1	2	0	0	11
MISC	1	0	1	1	1	0	0	0	4
Totals	38	3	33	56	20	9	5	5	169

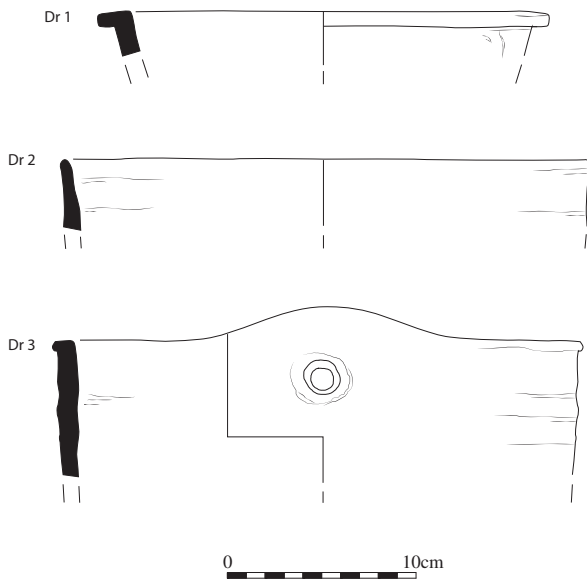


Fig. 6.12 Post-Roman pottery

From D Phase 3

Fill (4061) of corn drier flue [4086] produced a single small sherd from a handmade Anglo-Saxon jar or bowl in a local quartz-tempered fabric. The vessel is of 5th to 8th century date. Three sherds of mixed type were recovered from gully [4004], fill (4003). Two sherds are of handmade Anglo-Saxon type and one is from a large Northern Maxey-type ware jar or bowl of 8th to mid-9th century date.

From D Phase 4

Two sherds from a handmade jar in a mainly Greensand quartz fabric (MISC) were found in ditch [4031], from the fill (4036) representing a vessel of prehistoric or Anglo-Saxon date.

From Ploughsoil

Most of the post-Roman pottery recovered from this trench was found in ploughsoil (4000). The fourteen vessels are mainly of handmade Anglo-Saxon-type but two 8th century Northern Maxey-type vessels, a post-Medieval drinking vessel and a fragment of Early Modern earthenware also occurred.

Trench E

Nine sherds of pottery each representing a separate vessel were recovered from fill (5007) of ditch [5003] and topsoil (5000). Fill (5007) of the recut ditch

Catalogue of Drawn Post-Roman Pottery (Fig. 6.12)

Dr 1 – Bowl in Northern Maxey-type ware Fabric B; Mid-8th to mid-9th century. From the ploughsoil of Corner Field, context (2000).

Dr 2 – Jar in Erratic-tempered Handmade Anglo-Saxon fabric; 5th to 7th century. Trench B, gully [2009], fill context (2018).

Dr 3 – Large lugged jar in Northern Maxey-type ware Fabric C; Early to mid-8th century.

Trench A, (1027) fill of flue [1028] and (1014), fill of scoops [1021].

[5003] produced three small handmade Anglo-Saxon sherds of mixed type and two Early Modern sherds; this feature is thought to be of mid-to-late Roman date and these sherds all came from the area 2-4 metres to the north-west of the trench baulk on its southern side so may represent a sinkage fill or a point of disturbance (S. Willis, pers. comm.). The four sherds recovered from the modern topsoil (5000) comprise two further handmade Anglo-Saxon sherds, a Middle Saxon Northern Maxey-type jar or bowl and a Slipware sherd of Early Modern date.

6.2.10 Discussion

The nature of the pottery recovered from the site indicates that little of the material is likely to represent primary deposition. The potential of the assemblages is seriously hampered by this factor together with the types of deposit the pottery was recovered from. Excavation on several Lincolnshire sites of Early to Late Saxon date (see Flaxengate, Lincoln, Flixborough in North Lincolnshire and Fishtoft in South Lincolnshire (Perring 1981; Cope-Faulkner 2012)) suggests that pottery was disposed of in middens or was simply thrown into any open feature (for a 20th century example of this see Winifred Foley's *A Child in the Forest*, 1974). Subsequent activity on a site can then redistribute sherds through the sequence and often spread them some distance from the original deposition point but within the original area of land ownership. Sites such as Flaxengate and Flixborough suggest continual episodes of demolition, levelling and rebuilding reworking sherds through the sequence. A particular factor at Hatcliffe Top was rig and furrow ploughing that had occurred across the whole of the site within Corner Field which will have impacted on remains

of this period (and less so the cut features etc. of the Roman phases below).

Unfortunately only two of the handmade Anglo-Saxon vessels recovered show signs of chronological significance. Handmade mainly quartz-tempered vessels can be of early Anglo-Saxon date and therefore evidence for 5th to 7th century occupation in an area, or they may have been produced in the later 7th or 8th centuries in continuation of earlier traditions. The persistence of this tradition into the Middle Saxon period is more common outside of Lincolnshire but it is clear from excavations such as that at Flixborough that such wares did continue to be used in Lincolnshire into the later 7th and 8th centuries. The high number of handmade sherds found at this site however do argue for occupation between the 5th and 7th centuries as although handmade vessels occur in late 7th to 8th century deposits in Lincolnshire they usually only form a small proportion of the pottery in use. Specifically, an erratic-tempered jar (Fig. 6.12 no. 2) found in a gully late in the sequence at Trench B [2009] is of 5th to 7th century type and a Greensand-tempered small jar or bowl with burnish horizontal grooves found in topsoil/ploughsoil (3000) in Trench C probably dates to the 5th or 6th centuries. The trenches do appear to display a different patterning

of handmade ware types with Trenches A and B producing a higher proportion of Charnwood-type vessels and Trench C having more examples of local quartz-tempered fabrics.

Few of the 40 Middle Saxon vessels recovered from the site can be closely dated. No examples of the earliest late 7th to early 8th century Northern-type Maxey Fabric A were recovered from this site and conversely no 9th century Early Lincolnshire Fine-shelled ware vessels were found either. Three vessels are dateable directly to the first half of the 8th century and a further seven vessels are of 8th century date. Individually the remaining sherds can only be dated to between the 8th and mid-9th centuries but there is no reason to think that the material recovered from this site extends into the 9th century. Despite being fragmentary several sherds are in a fairly fresh condition and may represent primary deposition. These include the large Northern Maxey-type ware lugged jar (Fig. 6.12 no. 3) and other sherds found in flue [1028] in Trench A and Northern Maxey-type and local shell-tempered sherds in the furrow fill (1003) (or top of flue [1012]) also in Trench A. Little pottery attributable to the period from the 13th century onwards was recovered from the site and that which is present probably arrived there during episodes of manuring.

Chapter 7

The Finds from Hatcliffe Top

Steven Willis

with contributions by Rose Broadley, Caroline Farquhar, David Holman and Toby Martin

7.1 Objects associated with Personal Adornment and Dress

(Within this Chapter, for several of the categories of finds, the material is listed by 'Item number'. The 'Item number' is simply an identifying label relating to the site archive record. Generally the finds are ordered by date within their category.)

7.1.1 Metal Hair Pins

Item 21. Context (2000), ploughsoil, Corner Field, 2009. RF 2079. MD

Copper alloy. The head of a hair pin, broken at the junction with the stem or lower moulding. The head is air balloon shaped being spherical apart from a slightly flattened top and a conical tapering to the stem (cf. Crummy 1983, Types 2, 3 and 5). There is no collar moulding and the stem break is rather rounded which may be abrasion if it was not smoothed intentionally for some reason.

Height of head: 7mm, diameter of head: 7mm. Weight 1.2g. Date: Probably Roman or Anglo-Saxon.

Item 49. Context (2000), ploughsoil, Corner Field, 2010. RF 2082. MDSL

Copper alloy. Small hair pin; broken pin stem. The head is biconical, rising to a dome with a slight point. There is no moulding at the junction with the pin stem.

Extant length of pin stem: 7.5mm, diameter of head at girth: 5mm, height of head: 5.5mm. Weight 0.5g. Date: Probably Roman but could be Anglo-Saxon.

Item 11. Context (2000), ploughsoil, Corner Field, 2014. RF 2080. MDSL

Copper alloy, probably over iron at the head. Hair pin with biconical head rising to a point. The girth

of the head has an apparent waist/medial band, possibly as there was faceting at this location, but if so this has not survived well. There is a slight collar moulding at the junction of the head and the pin stem. The short circular sectioned, probably broken, pin stem may have been repointed and in such form would have been too short for use as a hair pin. The head is surprisingly heavy suggesting copper alloy coats a denser metal.

Extant length of pin stem: 19mm, head: 11mm x 11mm. Weight 4.3g. Date: Roman or Anglo-Saxon. This item lies within Cool's Group 1 category of metal hair pins, which is the most common group of the Late Roman period (Cool 1990b, 151-4). A collar moulding has been seen as potentially indicative of an Anglo-Saxon date as examples are known from graves of that period. Such a date may be the case with this hair pin from Hatcliffe Top, but that is far from certain given there is only a slight suggestion of a collar moulding. A copper alloy hairpin with a



Fig. 7.1 Item 11. Hairpin with biconical head. Right top: a view looking down the head end; right bottom: view looking along the pin stem.

biconical head of similar scale to the present item but with a clear collar and slightly flattened girth was recovered at 27 High Street, Horncastle, where it was not helpfully stratified; a late Saxon date is suggested by reference to examples from Whitby (White and Everson 1983, 73, fig. 23 no. 6). Similar items are published from Flixborough (Rogers 2009, fig 1.25 nos 407 and 409). Given that collars occur on similar pins at Roman sites, as at Verulamium (Frere 1972, fig. 34 nos 59-60), a Roman date for this item from Hatcliffe Top remains a possibility. (Fig. 7.1)

Item 12. Context (2000), ploughsoil, Corner Field, 2015. RF 4. MDL

Copper alloy. Hair pin with diamond and triangle faceted cuboid head. Including the top of the head, there are thirteen facets, with ring and dot decoration populating the four main diamond facets on the sides but not the top diamond facet of the pin head. Triangular facets replace the eight corners of the cube. There is a slight suggestion of a collar or cordon on one side of the junction of the stem and the head. The circular sectioned pin stem is broken. Extant length of pin stem 32.5mm, pin diameter 2mm, head 7mm x 5mm x 5mm. Weight 1.4g. Date: Late Roman or Anglo-Saxon.

This fine item has been carefully produced, as indicated by the unusually good symmetry of the facets and the precision in the decoration. The faceted cubic head type was popular in the Late Roman period and most numerous in the fourth century (Crummy 1983, 29) with Cool noting it to be the most common

category along with knob headed pins (her Group 1) in southern Britain (Cool 1990b, 164-5, Group 15; 2012, 136). Cool saw a cordon at the head/stem junction as indicative of late Saxon pins of similar typology; she further noted that such types were rarely decorated in the Roman era (Cool 1990b, 165). A closely similar pin to the item from Hatcliffe Top, with facets decorated with ring and dot, is illustrated by Sawyer in a collection of items taken to represent 8th and 9th century metalwork from Lincolnshire (Sawyer 1998, fig. 5.6) though this pin has a clear cordon at the junction. Pins with faceted cuboid heads decorated with ring and dot design are known from Flixborough (Rogers 2009, fig. 1.24). Nonetheless a virtually identical example to this pin from Hatcliffe Top, likewise in copper alloy with ring and dot decoration, was recovered from a Late Roman grave at Butt Road, Colchester, albeit that the Colchester item is slightly bigger (Crummy 1983, 29, fig. 29 no. 490); similarly there is a stratified bone cuboid head faceted pin from The Cups Hotel site, Colchester, attributed a Roman date, with ring and dot decoration (Crummy 1983, 23, fig. 20 no. 393). (Fig. 7.2)

7.1.2 Brooches

Item 23. Context (3000b), ploughsoil within Trench C, 2010. RF 3504

Copper alloy. Penannular brooch of Fowler's Type A4 (Fowler 1960, 150-2). Complete. The hoop is circular in section and 'chunky' at 3.5mm in diameter, for the brooch has a 'heavy' appearance for its size. The terminals are biconical each with four symmetrical cross-grooves. The pin has a slight dip.

The internal diameter is 23mm. Weight 11.2g. Date: Roman

This is a widely occurring Roman type, with, for instance, a similar brooch with milled rounded terminals recovered from topsoil at the Lion Walk site, Colchester (Crummy 1983, 18, fig. 15 no. 96). Similar sized penannular brooches with ribbed knob terminals occur at Leicester (Clay 1985, fig. 38 no. 7; Mackreth 1999, 253, fig. 120 no. 29), with the example from Bath Lane thought more akin to Fowler's A3, and Winterton villa, North Lincolnshire (Stead 1976, 201, fig. 102 no. 33) where it is ascribed a third or fourth century date. Mackreth, noting a number of examples from the East Midlands (1999, 253) thought those occurring in Late Roman deposits were residual, preferring a late first to early third century date range. This brooch from Hatcliffe Top came from the base of the ploughsoil over a medieval furrow, so was not usefully stratified. (Fig. 7.3)

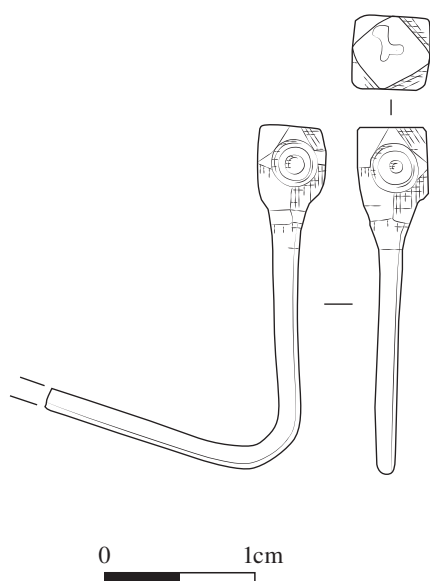


Fig. 7.2 Item 12. Hairpin with faceted cuboid head with ring and dot decoration.



Fig. 7.3 Item 23. Penannular brooch of Fowler's type A4.



Fig. 7.4 Item 1. Penannular brooch with snake's head terminal.

Item 1. Context (2000), ploughsoil Corner Field, 2007. RF 1008. MDSL

Copper alloy. Penannular brooch with snake's head terminal. The pin and one half of the hoop are missing. The hoop, which is somewhat flattened, is generally d-shaped in section; it broadens on the central section, opposite the terminal, where it is flatter. Paired notches run along the outer edges of the outer side, as a skeuomorph of a snake's scales (cf. a bracelet from Uley (Woodward and Leach 1993, fig. 128 no. 13)); this decoration approximates to Swift's d5/d6 style for bracelets (Swift 2000, fig. 206). The terminal tapers to a smooth point suggestive of a snake's head, and indeed

adjacent elliptical indents are evidently eyes.

Internal diameter is c. 19mm. Weight 3g. Date: Late Roman.

This would seem more likely a small brooch than a finger ring as the hoop thickening indicates the complete hoop would have been larger than a normal adult finger diameter. The snake's head design on jewellery and dress fittings was long-lived through the Roman period but was especially popular in the third and fourth centuries (cf. Mould 2010b, 197). As Swift has pointed out the representation of the snake is often highly stylized in such items, and features are often representational of the snake rather than conforming to an earlier Classical naturalism (2000, 117-8). In this case the terminal may also be rather worn; nonetheless the representation of a snake is apparent. A similar sized penannular brooch with notches but in this case with a simple terminal formed by the end being turned back on itself occurs at the Culver Street site, Colchester, where it is prescribed a Late Roman date (Crummy 1992a, 143-4, fig. 5.1, no. 34). (Fig. 7.4)

Item 33. Context (2000), ploughsoil, Corner Field, 2009. RF 2030. MDSL

Tin over copper alloy. Complete bead likely to be a knob from a Crossbow type brooch. The bead is essentially elliptical in profile with a slightly flattened dome top descending to a suggestion of an angle at the girth so that the bead is almost biconical. There are very slight irregularities to the shape indicating this is a craft product rather than machine made. The underside has the stump of a pin, evidently copper alloy from its corrosion products, which is approximately square in section, broken at the junction with the bead. XRF analysis registers 51% tin and 46% copper at the dome and 39% tin and 48% copper at the pin.

Height: 9mm, diameter at girth: 10mm. Weight 3.6g. Date: Roman

An alternative possibility is that this is the bead from a hair pin. The shape of this item conforms to Crummy's Type 3.A for Roman bone pins (Crummy 1983, 21). However, the weight of the bead probably rules out this possibility.

Item 20. Context (2000), ploughsoil Corner Field, 2009. RF 2071. MD

Copper alloy bow brooch fragment. This is likely to be from a Trumpet or related type. Only the upper part of the bow is represented. This has bold cross-mouldings separated by a pronounced groove. There is a central ridge moulding extending along the extant lower bow (for 6mm) from the cross-mouldings; this is an unusual feature for a Trumpet brooch, although as

a class they display much diversity. Above the cross-mouldings the bow is pinched in and is broken at the point where there is a suggestion of expansion to the trumpet end. Broadly similar mouldings can be seen on Trumpet brooches published from Usk (Manning 1995, fig. 26 nos 52-5).

Length (curving) c. 30mm, width (at broadest cross-moulding) 11mm. Weight 3.8g. Date: Roman. (Fig. 7.5)

Item 9. Context (2000), ploughsoil Corner Field, Stephenson Collection. RF 2109

Copper alloy bow brooch fragment. This is from a Trumpet type. The catch-plate and lower and middle section of the bow are represented. The bow has three cross-mouldings separated by flutes. There is no foot



Fig. 7.5 Item 20. Bow fragment from a Trumpet type brooch.



Fig. 7.6 Item 9. Bow and catchplate from a Trumpet type brooch.

but the base of the bow is marked by a cross-moulded knob.

Length: 39mm, max. width of bow: 6mm, max. depth from bow to catch-plate: 6mm. Weight 3.2g. Date: Roman.

Although fragmentary the style is similar to that of two brooches from *Ariconium* published by Mackreth (Mackreth 2012, 124-5, fig. 4.35 nos 64 and 67).

The East Midlands has produced other examples and according to Mackreth a date in the earlier second century for this type seems likely (Mackreth 2012, 125). (Fig. 7.6)

Item 64. Context (2000), ploughsoil Corner Field, 2014. RF 2072. MDDP

Anglo-Saxon cruciform brooch.

Toby F. Martin writes:

Form and decoration

The only part that remains of this brooch is the headplate, which is sufficient to classify it with confidence as an Anglo-Saxon cruciform brooch. The fragment is rectangular with a protruding zoomorphic knob on the top edge (the top knob). The right edge is somewhat damaged, and there is an obvious break on the bottom edge where the bow would once have joined the headplate but is now missing. The rectangular plate is decorated with a large ring-and-dot ornament at its centre and four smaller ring-and-dot ornaments at each corner. The central dots of each of these smaller ones perforate the headplate. The manner in which the central ring-and-dot motif has been deeply and cleanly drilled indicates that it may have once held enamel, which occasionally still survives in ornament of this nature on cruciform brooches. Running down the headplate unevenly and asymmetrically are two rows of punched double-s motifs. Round each external edge there is a single row of c-shape punched motifs, all oriented with the open part of the 'c' facing outward. The top knob was cast integrally with the rest of the headplate, and is joined to it by a small raised rectangular panel with a horizontal groove. The groove is decorated with a series of minute vertical incised lines. Protruding from this rectangular raised panel is the top knob itself, which is decorated with cast 'chip carved' ornament in a relatively deep relief. The ornament belongs to the well-known repertoire known as Salin's Style I and it consists of an upside-down human mask, whose moustaches sprout laterally into bird-headed profiles with a long, tightly curled beak still present on the right hand side (the left one is incomplete, cf. Martin 2013). The left and right knobs are now missing, but because there are no signs of breakage on the intact left edge it is possible

to say with certainty that they would have been cast separately, and the base of each of would have housed one end of the pin axis on the reverse. The reverse of the headplate has a single perforated lug that would have held this pin axis at its centre. The iron pin axis and spring mechanism itself is now missing, though traces remain in a clump of iron oxide, some of which has also spread onto the obverse of the headplate.

Typology and chronology

Although this brooch is only fragmentary, it can be placed with certainty in sub-group 4.1, possibly type 4.1.2 (Martin 2015a, 70). The diagnostic element that may allow it to be classified so specifically is the flat and rectangular nature of the small bar that joins the knob to the headplate, which tend to be more rounded among type 4.1.1. However, the small and unexpanded nature of the knob may suggest it belongs more readily among type 4.1.1. In any case, all of sub-group 4.1 belongs to cruciform brooch phase B, which runs from *c.* AD 475 to *c.* AD 550 (Martin 2015a, 128).

Parallels

This general headplate form is found among many sub-group 4.1 brooches. The fact that the headplate was not cast with three distinct panels but is divided into three fields by punched decoration is also found on examples from Morning Thorpe (Norfolk, grave 353, Green *et al.* 1987, 318) and another headplate fragment from Attleborough (Norfolk, recorded by the Portable Antiquities Scheme as NMS-6F9833),

both of which also have a very similar top knob ornament. Another interesting parallel comes in the form of a headplate fragment from Icklingham in Suffolk, which has similar top knob ornament, but more crucially it is the only other brooch in this sub-group to be decorated with ring-and-dot ornament. Intriguingly, although the only known illustration of this brooch is very poor (West 1998, 174), this headplate also appears to be decorated with double s-shaped punches, a punch form that was extremely rare on cruciform brooches, occurring only on six other examples in addition to these two (form A7, Martin 2015a, 152; cf. Martin 2015b). According to these specific parallels there is a clear link with East Anglia, which is certainly not out of character with sub-group 4.1 brooches, most of which are distributed in East Anglia and the East Midlands, including Lincolnshire.

Steven Willis writes: This item was examined via optical microscope, XRF and SEM/EDS analysis by the Physical Sciences Dept. University of Kent, confirming that it is copper alloy with tin; no traces of enamelling were detected and a red residue associated with one of the perforated holes on the left side proved to be iron oxide (Mason 2018).

Width of headplate: 33mm, height of headplate: 32mm, diameter of central ring: 7mm, diameter of corner rings: 4mm, width of top knob (projected): 24mm, projection of pin lug: 8mm. Weight 14g. (Fig. 7.7)



Fig. 7.7 Item 64. Headplate from an Anglo-Saxon Cruciform brooch.

7.1.3 Metal Bracelets

Item 19. Context (2000), ploughsoil, Corner Field, 2009. RF 2048. MDSL

Copper alloy. Part of a fairly broad horizontal bracelet with cross-groove and panel decoration. The bracelet is rectangular in section and the inner face is very smooth. This bracelet is elaborately decorated. The outer face of the band is divided evenly into square panels by double cross-grooves. Four panels are represented in this fragment and these are c. 5.5mm in length. The broader end of the band ends in an uneven break suggesting the bracelet snapped. The tapering end curves and is humped, having a pronounced central longitudinal exterior groove, but is broken before the terminal where there will almost certainly have been a hook or eye. Of the four panels the one nearest the terminal is plain but within the squares of the following two are lowered rectangles on both outer edges producing an overall highly symmetrical appearance. Similar, though continuous decoration occurs on two bracelets from Lankhills (Clarke 1979, 305, type D1f, fig. 80 no. 251 from a grave assigned a date of c. AD 310-70, but in this case the decoration is less symmetrically fashioned, and fig. 102 no. 649). The fourth panel, before the break, appears somewhat abraded on the outer side, perhaps through wear, but it seems there

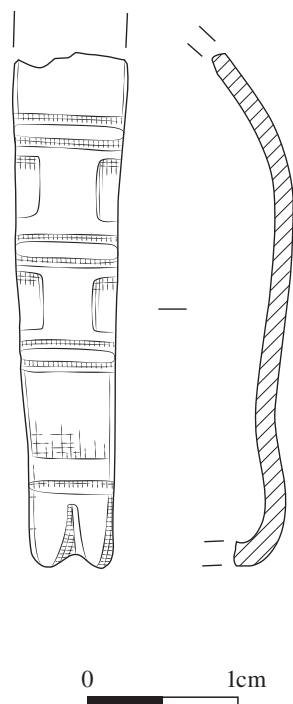


Fig. 7.8 Item 19. Copper alloy bracelet

were no bevelled recesses on this area of the bracelet and a different decoration choice is likely, with the indication this was stippling with a diagonal groove as with a broad bracelet type from Lankhills with panelled decoration (Clarke 1979, 309, fig. 37 nos 303 and 394, from grave contexts dated c. AD 370-90).

Extant length: 36.5mm, width: 8mm tapering to 5.5mm, depth: 1mm. Weight 2.8g. Date: Late Roman. (Fig. 7.8)

Item 31. Context (2000), ploughsoil, Corner Field, 2009. RF 2031. MDSL

Copper alloy. Bracelet terminal with eye and bead stop, cut through on the loop at an oblique angle. Only a short length of the bracelet loop is represented but appears to have been D-shaped. On the terminal side there are two cross-grooves separating cross mouldings, the distal one being slightly higher of the two. These border a pronounced bead stop which is higher than the rest of the extant bracelet. On the inner side, at the base of the bead, a flat loop projects with a comparatively large eye.

Length: 21mm, outer width of eye: 8mm, inner width of eye: 4mm, width at bead stop: 4mm, height of bead stop: 4.5mm. Weight 1.3g. Date: Late Roman.

Broadly similar terminals of like-size are seen amongst bracelets from the 1967-72 Lankhills graves (cf. Clarke 1979, fig. 75, no. 142, fig. 87 nos 403 and 406, fig. 98 no. 525, and fig. 102 no. 650). These were ascribed dates in the c. AD 350-410 envelope in the report (Clarke 1979, 301-11).

Item 16. Context (2000), ploughsoil, Corner Field, 2015. RF 41. MDSL

Copper alloy. Fragment of a light bracelet with crenellated decoration, flattened in the vertical plane rather than the horizontal plane with a thin front face (cf. Mould 2010b, 199, type 11, fig. 83 no. 372). The raised crenellations are square in profile and c. 4mm in length, with cross-grooving or 'teeth', there being three central deeper teeth and flanking, less pronounced, grooves either side. The raised crenellations have spaces between at 6mm. The crenellations appear somewhat worn or abraded. On one side of the bracelet the crenellations each have a sub-circular area at their centres that is reflective. Superficially these areas resemble a dark greenish-blue enamel. This is not enamelling but surviving elements of a patina. This item was examined via XRF and SEM/EDS analysis by the Physical Sciences Dept. University of Kent, confirming that it is copper alloy; no traces of enamelling were detected (Mason 2018).

Extant length: c. 25mm, width: 1.5mm, depth:

2-4mm. Weight 1g. Date: Late Roman.

Mould notes the wide distribution of bracelets of this general type in Roman Britain in fourth century contexts (Mould 2010b, 199). This item from Hatcliffe Top is Clarke's Lankhills 'cog wheel' type D1d or e (Clarke 1979, 305, fig. 37 nos 437 and 568, dated AD 350-370/380, with parallels in the south of Britain noted). There is a bracelet of this type represented at Dragonby, recovered unstratified, which is close in detail and dimensions to the example from Hatcliffe Top (Knowles and May 1996, 271, fig. 11.19 no. 9). Another is recorded from Horncastle where it was not helpfully stratified but a late 4th century date is ascribed (White and Everson 1983, 73, fig. 23 no. 2). A further example comes from Ancaster (Cool 1983, fig. 53 no. 2), while Kenyon published two bracelets of this type from the Jewry Wall site, Leicester (Kenyon 1948, 253, fig. 83 nos 1 and 3). Swift's distribution map shows that this type was common in southern Britain and is much less frequent north of The Wash (Swift 2000, 127, fig. 163).

Item 47. Context (2000), ploughsoil, Corner Field, 2016. RF 2084. MDSL

Copper alloy. Solid wire-type penannular bracelet of approximate snake type. D-shaped in section, the hoop has a long regular taper to the terminal which thickens slightly on the sides and outer surface (from c. 7mm before the terminal) before ending in a point and thereby is suggestive of a snake's head. The extant hoop has very fine closely spaced angled grooves along each edge which although faint are discernible by eye and touch and suggestive of snakeskin scales. Otherwise it is smooth and plain with a developed patina on its long regular taper. The break is old and abraded; although not exactly a straight break this could well be the result of a deliberate chopping through of the hoop. The hoop has a slight distorting bend perhaps the result of bending in antiquity to straighten the fragment without breaking it further. Extant length: 48mm, width: 4.5mm, depth: 2mm. Weight 1.7g. Date: Late Roman.

This simple form is characteristically of Late Roman date.

Item 2. Context (2000), ploughsoil, Corner Field. Stephenson Collection. RF 2110.

Copper alloy, apparently brass, solid wire-type bracelet of likely snake type, with a hook and eye closing. One half (with the hook) is missing and the eye on the extant half is broken, so half present. Circular in section, the hoop is decorated with continuous closely spaced fine traverse grooves; there is a small bead stop or block (rising 1mm above the hoop) at the



Fig. 7.9 Item 2. Copper alloy bracelet.

junction of the eye and the hoop. Such raised blocks by terminals are a feature seen on some fourth century brooches (cf. Swift 2000, 145, fig. 191).

Extant length: 67mm, maximum diameter: 3mm, diameter of eye (i.e. the opening): 4mm. Weight 3g. Date: Late Roman.

This item has a likely chisel-cut end indicative of chopping for refashioning or scrap; if so presumably following the failure of the eye. This well-fashioned bracelet has standard features for the Late Roman period. (Fig. 7.9)

7.1.4 Metal Finger Rings

Item 27. Context (3000b), topsoil/ploughsoil within Trench C, 2010. RF 3512. MDSL

Copper alloy. Fragment possibly from a finger ring, comprising a flat thin strip with smooth edges broken at both ends. The item is bent at one end and curves marginally at the other. It is slightly broader towards one end (the bent end) at 5.5mm tapering to 5mm, though the broadening may be distortion. There is no decoration though the outer side has a smooth patina while the inner side is matt and seems rougher though that is probably solely due to corrosion. There are a number of possibilities as to what such a strip may derive from, of which a finger ring is a fair suggestion. Length: 16mm, width: c. 5mm, thickness: 0.5mm. Weight 0.3g. Date: Roman?

Item 8. Context (3700), topsoil within Trench C, 2015. RF 3513. MDSL

Copper alloy. A decorated strip probably from a penannular finger ring, distorted and broken (perhaps only at one end). A central groove on the exterior is flanked by paired adjacent angled notches, creating a milled appearance. The potentially unbroken end could have been cut across but the decoration changes near this point to grooves that traverse the band suggesting a terminal marked by triple grooving.

The extant length is 30mm, so approximately half the ring is represented. 5mm in width and approx. rectangular in section with rounded edges. Weight 1g. Date: Roman.

Item 5. Context (2000), ploughsoil Corner Field, 2009. RF 2024. MDSL

Copper alloy. A plain penannular strip type finger ring approximately rectangular in section with rounded edges. The ring is broken near to one terminal and is now distorted. The extant terminal tapers and a slight groove across the band at the point where the taper starts plus one or two point impressions imply a crudely stylized representation of a snake's head. Extant length: 57mm, width: 4mm. Weight 2g. Date: Roman.

Item 18. Context (2000), ploughsoil, Corner Field, 2009. RF 2033. MDSL

Gold. Finger ring fragment with settings. Since this item is made substantially of gold and is more than 300 years old it was designated as treasure as stipulated in the Treasure Act of 1996 (Reference PAS: KENT-881F44).

Richard Hobbs and Hellen Geake write: Fragment of Roman gold finger ring. The fragment consists of two box settings soldered to a backplate composed of a rectangular strip of sheet gold. One setting is a rectangular cell set with a piece of blue/green glass, the other a rounded box setting, now rather distorted, the setting from which is now missing. The angles between the cells have granulation in the form of gold pellets, some of which has broken away. There is a clean and regular break at the circular box setting end which might be deliberate; the other end is also broken. It is highly likely that originally there was a matching circular box setting on the other side of the rectangular setting.

Length: 12.6mm, Width: 7.2mm. Weight 1.1g. Date: fourth century AD.

The fragment is almost identical to the bezel of a complete finger-ring from the Thetford treasure (BM 1981,0201.14), a ring with a hoop of twisted or roped wires. The bezel of this ring consists of a similar

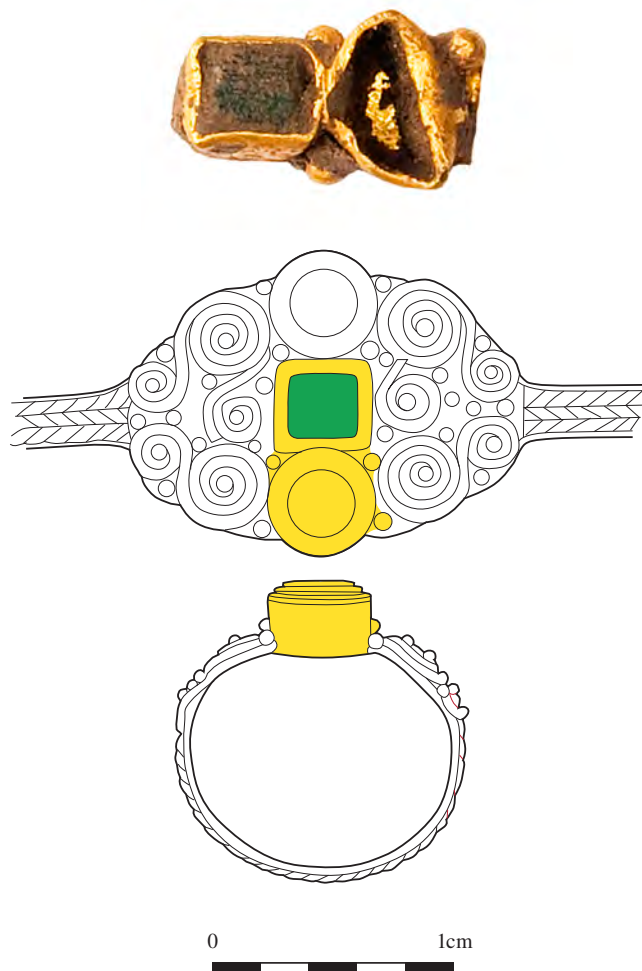


Fig. 7.10 Item 18. The ring fragment as found (above) and a reconstruction based on the parallel with the Thetford ring (below).

arrangement of box settings in this instance (i.e. Thetford) all set with green glass (Johns and Potter 1983, 88-91, fig. 14 no. 14). (Fig. 7.10)

Item 13. Context (2000), ploughsoil, Corner Field, 2015. RF 24. MDSL

Copper alloy. Penannular finger ring fragment. Approximately rectangular in section with somewhat rounded edges. The outer side has paired notches along the outer edges with a central groove running the length of the item, from the terminal to the break. The one extant terminal is simply a square cut but it is marked by a 2mm margin which is plain before a cross groove, after which the notching begins. This item has similar decoration therefore to the brooch RF 8 from this site, though the latter is a much heavier item and lacks the central groove. This decoration approximates to Swift's d5/d6 style for bracelets (Swift 2000, fig. 206). Diameter uncertain as bent and fragmentary. Length: 34mm, width: 3.5mm, height: 1mm. Weight 1g. Date: Roman.

A Roman finger ring with like decoration (opposing notches and central groove), though in this case a continuous hoop rather than penannular, and thinner at 2mm, is reported from Lion Walk, Colchester (Crummy 1983, 47, fig. 50 no. 1764).

7.1.5 Metal Bead

Item 56. Context (2000), ploughsoil, Corner Field, 2010. RF 2073. MDSL

Copper alloy (brass) bead. The basic form is that of a rounded segment (as from an orange), with a curving front, a perforation through the 'top' end, and with both terminals somewhat pointed. Quite corroded. The bead is heavy for its size, perhaps with the aim to ensure its downward suspension. EDXRF analysis confirmed the item is copper alloy with zinc, lead and some iron. An alternative possibility is that it is a delicate weight.

Length: 11.5mm, width: 6mm, depth: 8mm, diameter of piercing: 5mm narrowing to 3m. Weight 1.9g. Date: Roman?

7.1.6 Buckles

Item 39. Context (1031), fill of Ditch [1068]. Trench Phase 2. RF 3.

Copper alloy loop. A cast D-shaped buckle loop, incomplete (extant length: 38.5mm). Approximately one half of the loop is present (the pin is absent). The loop is D-shaped in section and 2.5-3mm in height (the straight side being marginally thicker). The outer dimensions of the loop can be projected across from the straight side as 20mm across and the interior 16mm. The loop has some vestigial fine grooved line decoration around what is presumably its outer face; the grooves are 2.5mm in length and placed 1.5mm apart; they are absent or become indistinct in the curving part of the buckle loop. They are reminiscent of the grooves on brooch RF 8. On the other side of the loop there are four notches which might be taken as damage but which could be intentional decoration as they are evenly spaced apart at intervals of 8mm. The breaks on the loop are irregular. There is some possibility that this item is in fact a distorted fragment of a finger ring or bracelet, though its thickness would make for a heavy ring. The fine grooving would be consistent with snake-type decoration seen on some bracelets and rings from this site and might well be concealed if this were a functioning buckle.

Weight 2.3g. Date: Late Roman.

There is a similar sized D-shaped buckle in copper alloy but of slightly contrasting section present at

Lankhills though it is not decorated (Clarke 1979, fig. 35 no. 488). This item is possibly from a harness rather than a belt.

Item 22. Context (4002), layer. Trench Phase 3. RF 4004. MDSL

Brass loop with iron pin. A complete D-shaped loop and tongue buckle. The cast loop is D-shaped in section and 3mm in height. The outer dimensions of the loop are 32mm x 16mm and the interior 23 x 16.5. The pin is round in section, 22mm in length with a central dip rising to the tapering tip where it overlies the curve of the D. At the straight side of the D the pin is wrapped round the loop. The loop has grooved line decoration around its exterior and it is recessed at the outer top and bottom edges by the corner joints with the curve.

Weight 8.4g. Date: Late Roman.

There is a similar sized D-shaped buckle from Ickham, Kent, though it is iron, which is suggested as perhaps military (Mould 2010a, 145, fig. 67 no. 16). Another from Ickham in the Late Roman belt category and copper alloy, has low-key schematic 'carving' representing animal heads at the junction with the hinge-bar (Ager 2010, 164, fig. 72 no. 122). A similar sized but rectangular rather than D-shaped 'bronze' buckle from the Lankhills cemetery has like decoration on the loop (Clarke 1979, 272-3, fig. 34 no. 279 from a grave dated c. AD 350-390). This item is possibly from a harness rather than a belt. Cleaned and conserved by Graham Morgan. (Fig. 7.11)



Fig. 7.11 Item 22. Buckle. Above: underside view; below: the outer view.

7.1.7 Hobnails

Incidence of Hobnails at Hatcliffe Top

Hobnails made of iron and of Roman date were recovered from all five main trenches and from the Corner Field ploughsoil in the course of the fieldwork at Hatcliffe Top 2007-16. Most were recovered by metal detecting mainly prior to context excavation or through scanning the discrete heaps of spoil per context after excavation. One example was recovered from a bulk soil sample collected for environmental analysis. The occurrence of hobnails is listed in Table 7.1.

Discussion

Iron hobnails of Roman date had domed heads and short shanks. Some typical examples, according to Manning, can measure c. 12mm in diameter at the head and have shanks of 14mm in length (Manning 1985, 136; 1976, 43). The small number from Hatcliffe Top have heads that are a little under that diameter while shanks are mainly around Manning's typical 14mm. The hobnail from (1061) weighs 1.3 grams and that will be the approximate weight of the other examples from the present site.

Hobnails were added to the soles of Roman footwear with the aim of assisting longevity. In Britain this is

Table 7.1 The hobnails from the fieldwork at Hatcliffe Top. (Where turned, through hammering, the angle at which the hobnail shank is turned is recorded in degrees; its length is recorded, with (B) indicating if the shank is incomplete/noticeably broken)

Context	Number	Characteristics	Notes
Trench A			
1031 Ditch fill	5	Domed head, D: 9mm; shank 90°, 12mm. Domed head, D: 9.5mm; shank 6.5mm (B) Domed head, D: 11mm; shank 7mm (B) Domed head, D: 10mm; shank 90°, 10mm Domed head, L: 13.5mm (splayed to one side) W: 8mm; shank 70°, 15.5mm	
1047 Ditch fill	1	Domed head, D: 11.5mm; shank off-centre, 30°, 9mm (B)	
1061 Ditch fill	1	Domed head, D: 9.5mm; shank 45°, 13mm	From Environmental sample
Trench B			
2001 Topsoil	2	Domed head, D: 8mm; shank 8.5mm (B) Domed head, L: 7.5mm, W: 7.5mm; shank 20°, 10mm	
2017 Ditch fill	2	Domed head, D: 11mm; shank 45°, 10mm (B) Domed head, D: 9mm; shank 90°, 9.5mm	
Trench C			
3004 Ditch fill	1	Domed head, D: 11mm; shank 70°, 14mm	
3500 Cobbled path	1	Domed head, L: 9mm, W: 9mm; shank 110°, 13mm	
3505 Ditch fill	1	Domed head, L: 10mm, W: 7mm; shank 45°, 14mm	
Trench D			
4036 Ditch fill	1	Domed head, D: 11mm; shank 90°, 14mm	
Trench E			
Unstratified	1	Domed head, L: 8.5mm, W: 6.5mm; shank 6.5mm (B)	
Corner Field			
Ploughsoil (from metal detecting)	3	Domed head, D: 10mm; shank 10°, 9mm (B) Worn head, L: 8mm, W: 6mm; shank 15°, 8mm (B at angle) Domed head, L: 14mm, W: 10mm; shank 20°, 12mm (B)	From 2008 season From 2008 season; in poor condition From 2015 season (RF 2085)

seen with military footwear and, from c. AD 100 if not before, civilian footwear too (Crummy 2011, 49). They are found fairly frequently on sites of the Roman era separately or in groups. When found in groups this is usually due to items of footwear having been discarded in an extant or semi-extant form. When shoes were included in graves the pattern of hobnails can show the shape of the sole and the areas where hobnails were added (Manning 1985, 136). The arrangement of the hobnails can be distinctive and so hobnail impressions can be a statement of human identity and being in the world. Many hobnail finds are, however, singletons, the result of occasional casual losses. Though they may be considered a somewhat common find, their incidence per site can vary considerably (McLaren 2013, table 4.25). Given the likely numbers of hobnails produced and employed in Roman footwear it is possibly surprising that more are not routinely recovered. This may reflect various factors: their vulnerability to wear and to corrosion in typical archaeological environments in northern Europe (cf. Crummy 2011, 49), problems and challenges in recognition (cf. Crummy 2011, 48), their size, and the tendency for those using metal detectors to discriminate for nonferrous finds, especially away from excavation trenches. Wear of the domed head of a hobnail might lead to replacement or if not, prolonged use may result in the head being completely worn away or snapping, meaning that the resultant fragments are highly unlikely to be recognized for what they were. A further consideration, not least with reference to Hatcliffe Top, is that hobnails seem to become less common as a medium of attachment, as seen in later Roman contexts (cf. Vanhoutte 2018, appendix 27, 374; see below). All the above noted, the hobnails forming this assemblage are in very good condition. To be recognized of course they need to be sufficiently extant, but whilst bearing that in mind these examples are fairly intact. Various lengths of the point of the shanks are missing in some cases but otherwise these hobnails are less corroded and much more stable than are the larger iron items from the stratified contexts and topsoil at the site.

The nineteen hobnails from Corner Field came from various locations across the site, either from Roman ditch fills or topsoil/ploughsoil, and in one case from the cobbled path at Trench C. Seven came from the complex of ditches at the north-west end of Trench A and it is conceivable they relate to one shoe discarded at this location, with perhaps the hobnails being dissipated, though this is simply a possibility. Although the sample is small the fact that all of the stratified examples came from ditches (twelve examples in total) with one too from the path at C is probably significant and not simply a function of the fact these features

held a large proportion of the excavated deposits. The occurrence may reflect the movement of people around the site as most, if not all, of these ditches lie alongside access routes. Hobnails 'lost in transit' may have lain on traversed surfaces and sooner or later found their way into ditches flanking, draining and defining trackways and pathways through the settlement and its activity zones. That no examples were recovered from other context types may relate to less frequent human activity.

The modest number of hobnails from Hatcliffe Top can be compared to the site tally from Shiptonthorpe, East Yorkshire, where only five were found at this Roman Roadside Settlement, despite careful hand-digging and systematic metal-detecting (Snetterton-Lewis 2006, 234). Similarly only 13 hobnails are listed from the excavations at Burnby Lane, Hayton, East Yorkshire, where a similar collection regime was in place (Halkon *et al.* 2015, 302). Likewise only eleven examples were found at the villa complex at Ingleby Barwick near Stockton (McLaren 2013). This may raise questions about the nature of footwear favoured by some Romano-British rural communities. Closer to the present site, hobnails were recovered at the Nettleton/Rothwell Roman Roadside Settlement where they were associated with a major trackside ditch (Willis 2013, Appendix 1; this volume, Appendix). It has been suggested that hobnails were less common in the later Roman period, with Allason-Jones (2010, 84) stating that their use declines in the fourth century so that they are virtually absent by AD 400. Wooden shoes similar to clogs may have been quite common at this time. This may go some way to explain their infrequency at Hatcliffe Top. Although finds at the late cemetery at Lankhills show their continued use well into the fourth century (Clarke 1979, 322-5) their presence in such cemetery contexts might not necessarily be representative. At Hatcliffe Top, unless they are residual, the association is with Late Roman contexts, including several of the latest Roman contexts. In small measure this information represents a contribution to such debates.

7.2 Household Utensils

Knives

Item 54. Context (1051), upper fill of Ditch [1063]. Trench A, 2007, Phase 2. RF 12.

Iron knife blade, broken before tip and tang. As recovered, corroded but stable. This piece is from a 'standard' blade with a narrowing back and gently curving blade (cf. Manning 1985, principal type 11, fig. 28).

Overall length of fragment: 39mm, extant blade length: 39mm, max. extant width of blade: 18mm narrowing to 10mm, thickness at back of blade: 5mm narrowing to c. 1mm exaggerated by flaking off of corroded metal. Weight: 9g. Date: Roman.

Item 40. Context (2038), fill of Gully [2039]. Trench B, 2009, Phase 1. RF 2114.

Iron fragment, evidently part of a knife blade. As recovered, highly corroded but stable. This piece is from the junction of the tang and the blade as it expands to become the blade, but the blade edge itself is not represented. Sub-rectangular in section. The top of the tang runs straight with the blade back while the bottom of the tang develops into a convex curve as it expands to form the edge of the blade, rather than there being an abrupt angle.

Overall length: 29mm, extant blade length: 12mm, tang length: 17mm, width of blade: 13mm, thickness at blade back: 3.5mm, the tang tapers to a width of 5mm and a thickness of 2.5mm at its broken end. Weight: 2.7g. Date: Roman.

Item 7. Context (3502), path surface metaling. Trench C, 2010, Phase 2. RF 3501.

Iron knife blade and tang, almost complete. As recovered, highly corroded but stable. This item has a straight blade with its edge and back parallel. The blade is wedge shaped in section. The tang is stepped down slightly below the line of the back. The square-sectioned tang is broken and the tip of the blade is missing.

Overall length: 149mm, blade length: 82mm, tang length: 65mm; max. width of blade: 19mm, thickness at blade back: 3mm, the tang is c. 9 x 7 mm tapering to c. 7 x 5.5mm at its broken end. Weight (after cleaning and conservation): 34g. Date: Roman

This item is an example of Manning's type 10 and similar to his Q31 and particularly Q32 examples (Manning 1985, 113, pl. 54). Manning notes that this simple form, represented at Hod Hill, was in use over a long period so the dating of the type is first to fourth century (1985, 114). Cleaned and conserved by Jenny Jones of Durham University Archaeological Conservation Lab.; Durham X-radiograph No 6047/6411. Jenny Jones observed that the colour and texture of the corrosion products on the blade suggest mineralized organic material but that no visible structure remains. (Fig. 7.12)

Item 57. Context (2001), ploughsoil within Trench B, 2008. RF 2001. MDSL

Iron fragment, probably a knife blade, broken before tip and tang. As recovered, corroded but stable. This

piece is from a 'standard' blade with a narrowing back and gently curving blade (cf. Manning 1985, principal type 11, fig. 28).

Overall length of fragment: 22mm, extant blade length: 22mm, max. extant width of blade: 19mm narrowing to 7.5mm, thickness at back of blade: 3mm (corroded). Weight: 3.3g. Date: Probably Roman

Item 58. Context (2001), ploughsoil within Trench B, 2008. RF 2002. MDSL

Iron knife tip. As recovered, corroded but stable. This piece is not from the same knife as the other knife fragment from this context. From a 'standard' blade with a narrowing back and gently curving blade (cf. Manning 1985, principal type 11, fig. 28).

Overall length: 24mm, extant blade length: 24mm, width of blade: 10mm narrowing to 1.5mm, thickness at back of blade: 2mm. Weight: 1.3g. Date: Probably Roman.

Item 51. Context (3000a), topsoil within Trench C, 2010. RF 3511.

Iron knife blade and tang, incomplete. As recovered, highly corroded; now unstable. The blade and tang are both broken and only a short length of each survives. The tang, as represented by what survives, is stepped somewhat below the blade back. The blade is triangular in section and the comparatively broad head suggests a heavy knife. The tang may have lost some of its width through corrosion. Insufficient survives to determine the type.

Overall length: 36mm, extant blade length: 23mm, extant tang length: 13mm; max. width of blade: 12mm, thickness at blade back: 7.5mm, the tang is 6mm in width tapering to 3.5mm at its broken end. Weight: 3.2g. Date: Probably Roman.



Fig. 7.12 Item 7. Iron knife blade and tang.

7.3 Tools

Wood-working chisel

Item 53. Context (1047), fill of Ditch [1048]. Trench Phase 2. RF 11.

A faceted wedge of iron, evidently from the working/blade end of a carpenter's chisel. The back of the blade is flat as are the lower sides which give way to a bevelled angle rising to the top of the blade; the latter is flat but is angled down to the blade end. This well-proportioned wedge form is thus closely reminiscent of the modern tool. The blade tip is missing, seemingly broken in antiquity, as is the opposite end. Surfaces are corroded but as found the item was in good condition bar the damage in antiquity.

Length: 52mm; width: 16mm, height: 10mm tapering to 4mm; width at top c. 10mm. Weight: 42.2g. Date: Roman. (Fig. 7.13)

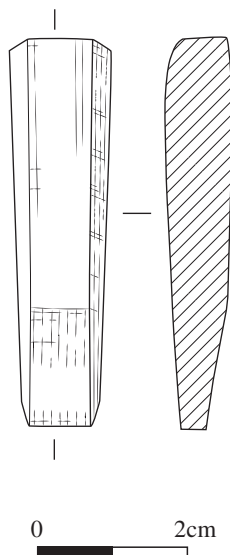


Fig. 7.13 Item 53. Iron chisel.

Sheath chape for knife

Item 60. Context (2017), fill of Ditch [2006]. Trench Phase 2. RF 2005.

Iron fragment, probably part of a chape from a sheath for a dagger or small knife. As recovered, corroded. Flat triangular plate ending in a point terminal; the opposite end is evidently broken but shows a triangular cut on one side perhaps representing the beginning of fretwork.

Length: 21mm, width: 16mm, depth: c. 2mm. Weight: 1.5g. Date: Roman.

7.4 Fittings, Studs, Bosses, Buttons and Mounts

Item 38. Context (3500), path surface metaling. Trench Phase 2. RF 2078.

Copper alloy. Part of a flat mount or fitting. The item comes from a terminal with a comparatively large perforation in the centre of a loop. The outer edges are rounded in profile while the perforation edge is straight.

Length: 11mm, width: 9mm, thickness: 2mm, diameter of perforation: min. 5mm. Weight: 0.8g. Date: Roman.

Item 45. Context (2001), topsoil within Trench B, 2008. RF 2069. MDSL

Copper alloy. Round button, stud or rivet, broken at the junction with the stem or loop for attachment. The button face is circular and corroded but undulations suggest a decorative design not fully indistinct. The underside is corroded but much smoother. A sub-square stump projects slightly but the stem is broken at this point.

Diameter of disc face: 14mm, thickness: 2.5mm, width of stem junction: 3mm, height of extant stem: 1mm. Weight 2.2g. Date: Uncertain, perhaps Modern. This is probably a dress fitting item.

Item 34. Context (2000), ploughsoil, Corner Field, 2014. RF 25. MDSL

Copper alloy. Small mount with pin; incomplete. The main body of the item is sub-square with rounded corners at the 'top' end and a projecting stem on the opposite side. The upper face is slightly convex with cross-grooving over the main body executed to create diamond shapes as with a pine cone to which there is a firm resemblance. There are five grooves angled from bottom left to top right and four from bottom right to top left. The body tapers to a stem on the lower side and at this point there are flanking parallel



Fig. 7.14 Item 34. Small copper alloy mount with pin.

grooves. The top end is straight and looks to have been clipped or broken at this point, though it is possible this is simply rough finishing. The opposite end has a projection (a stem) with a cross groove and beyond that a moulding where the item is probably broken. The underside has a flat perimeter but is dished in the centre (concave) with a central pin projecting. The latter appears complete and indeed is slightly flattened at the terminal suggesting it is intact and also the thickness of the item/material (perhaps leather) it was attached to (as it was riveted down).

Length: 15.5mm, width: 10mm, height: 1mm, length of pin: 3mm, diameter of pin: 1mm, width of stem: 5mm, height of stem: 2mm. Weight 1.4g. Date: Roman. (Fig. 7.14)

Item 17. Context (2000), ploughsoil, Corner Field, 2015. RF 42. MDSL

Copper alloy. Boss with smooth symmetrical dome; the concave interior is more roughly finished. The dome continues uninterrupted to the edge which is regular and smooth, bar a 5mm length on the circumference where part has been removed or broken leaving a missing small semi-circle. There is no indication that there was a pin on the interior for attachment so this item will have been attached by a different means of fixing or setting. It is possible that it once had a quatrefoil flat surround for attachment which has been cut away (cf. Stead 1976, 214, fig. 113 no. 126).

Diameter: 17mm, height: 8mm. weight 1.6g. Date uncertain but potentially Roman.

Item 30. Context (2000), ploughsoil, Corner Field, 2015. RF 2076. MDSL

Copper alloy. A flat strip, broken at both ends, probably from a rectangular shaped mount such as

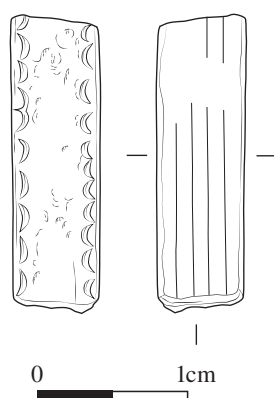


Fig. 7.15 Item 30. Decorated copper alloy strip.

a belt stiffener. The strip is basically rectangular in section, comparatively thick, with slightly rounded edges. The apparent underside has four fine slightly irregular linear striations running parallel with the sides and the surface is blackened, possibly through corrosion. These marks do not appear to be decoration. The upper surface is decorated, with fine punched half-moon crescents (c. 1.5mm in length) along the two long edges with the open side out-facing and not arranged in opposing pairs or with great care. The broken ends look to have snapped rather than been chopped.

Length: 21.5mm, width: 6mm, thickness: 1mm.

Weight 1.5g. Date: Probably late fourth century.

This item appears to be part of a mount, perhaps a belt stiffener (cf. Clarke 1979, 285, fig. 33 and fig. 95 no. 491), a possibility supported by its comparative thickness. If it is a stiffener it may be from a relatively elaborate belt. (Fig. 7.15)

Item 14. Context (2000), ploughsoil, Corner Field, 2015. RF 25. MDSL

Copper alloy. Small button or stud fragment. The item is approximately semi-circular, broken across its diameter with a slight semi-circle missing near the centre. The circumference is regular and the outer face plain and flat; the likely underside rises very slightly towards the centre and is plain; near the centre the scar of a broken away pin or loop is apparent.

Diameter: 13mm, height: 1mm. Weight 0.3g. Date uncertain but probably post-Roman/Modern.

Item 15. Context (2000), ploughsoil, Corner Field, 2015. RF 1530. MDSL

Copper alloy. Button with loop attachment. The button face is circular and flat; it is quite corroded though a '3' or similar motif/embellish is visible on one side of the face (possibly it is a 'B'). A circular loop, circular in section, is attached centrally at the back presumably by soldering; this is now bent towards the back of the button disc.

Diameter of disc face: 18.5mm, thickness: 1.5mm, diameter across loop internally: 4.5mm, loop diameter 2mm. Weight 4.4g. Date uncertain but probably Modern.

Item 41. Context (2000), ploughsoil, Corner Field, 2016. RF 31. MDSL

Copper alloy and iron. A circular mount, stud or button, largely complete. The outer face is a smooth slightly domed counter shape with flat top and rounded edge. Across this face three symmetrically arranged thin grooves have been cut to bisect near

to the centre point, forming a radial pattern (a six-pointed star) creating six segments (not equal segments as the point of intersection of the grooves is off-centre meaning one half has small segments). The underside is roughly finished (?corroded) and has a broken/corroded iron pin, for attachment, now only slight projecting from the underside of the counter shape. This may have been rectangular in section as there is a longitudinal groove 4mm in length across this point of breakage, perhaps a recess for a loop attachment.

Diameter of disc: 11.5mm, height of disc: 2.5mm, length of extant pin: 3.5mm. Weight: 1.5g. Date: Potentially Roman.

A similar though larger and complete copper alloy stud was recovered from the Lion Walk site, Colchester, from a post-Roman deposit (Crummy 1988, 80, fig. 83 no. 3193). This item was found in an area of Corner Field where Roman coins were also collected from the ploughsoil. Perhaps a terminal (pommel) of a handle for a small knife.

Item 25. Context (2000), ploughsoil, Corner Field, Stephenson Collection. RF 2113.

Copper alloy. Probable strap end mount from a belt, broadly triangular in shape, with both points of attachment broken, at the broad end and at the tip. The outline shape is that of an isosceles triangle, perhaps originally with slightly rounded corners at the broad end. The upper face is decorated and may have been enamelled within its recesses (cells). Within the triangular outer shape is a slightly smaller isosceles triangle (27mm by 21mm) represented by a band border (2mm wide); within, the corners are populated by recessed ivy leaf or heart shapes while the main emblem is a recessed tulip shape with a central hollow circle. The plain underside shows evidence of filing in

two directions to flatten and smooth the surface. At the broad end the loop or similar for attachment is missing, perhaps having been clipped and then smoothed as it is now represented by three notches separated by two vestigial projections. The tip is also missing and presumably there was an attachment eye at this point. This item was examined via XRF and SEM/EDS analysis by the Physical Sciences Dept. University of Kent, confirming that it is copper alloy; no traces of enamelling were detected (Mason 2018).

Length: 28mm, width: 21mm, thickness: 1mm. Weight 4.4g. Date: Late Roman.

Considering the design of this item it is worth noting that in his study of seal boxes from Roman Britain Andrews notes the ivy leaf or heart shape as the most common decorative motif, perhaps an intentional symbol of Dionysus or a counter to the evil eye (Andrews 2012, 16, 102-3); a seal box lid from nearby Binbrook (TF 22 92) has an ivy/heart emblem (PAS id NLM-117B5F NLM31772). Central circles are also a frequent feature on seal box lids, but whilst the size of this find is consistent with the seal box form no parallel for this shape is known amongst the corpus of seal boxes (pers. comm. Dr Colin Andrews). A more likely probability is that this is a strap end mount for securing a thin strap to a broader belt (cf. Clarke 1979, fig. 33). Such a mount, of comparable scale but of differing style details, was recovered from a Late Roman cemetery at Western Road, Leicester, and is ascribed a date of late fourth to early fifth century, perhaps the mark of a soldier or civil servant (*Current Archaeology* 2016, 6-7; Morris 2016, 22-3). The item has a very smooth feel as with a worn coin (especially like the feel of a pre-decimal worn coin) and its broad-end corners are now quite rounded. These aspects must mean this wear results from a period of use while the mount was on the belt, or taken together with the smoothing at the point of attachment at the broad end it is quite likely this item was reworked and had a second life, after its original function, perhaps as a token, keepsake or curio held in a purse or pocket. (Fig. 7.16)



Fig. 7.16 Item 25. Likely strap end mount.

Item 28. Context (2000), ploughsoil, Corner Field. Stephenson Collection. RF 2112.

Copper alloy over iron. A symmetrical toggle shaped item, probably a decorative terminal. The long barrel shaped body tapers to each end with seven longitudinal grooves framing panels. There are six panels with fine diagonal short grooves arranged to create herring bone patterns; these are variably distinct due to wear. One panel is bordered on one side with a double groove and this is by an attachment point. The centre of the adjacent panel shows a circular scare where there was

a tang, pin or loop, now missing, for attachment to another element. The diagonal grooves are present within this panel but are not so well-angled as those in other panels indicating they are secondary in execution to the attachment fitting. The two end terminals are flat and circular with rounded edges and there is a continuous circular groove defining the edge of the terminals. One terminal is well-preserved but the other is slightly damaged either through use wear or subsequently. XRF analysis shows that the attachment point is principally iron, but the item is coated in copper alloy.

Length: 18.5mm, diameter at waist: 8mm, diameter at terminals: 4mm. Weight 5.1g. Date: uncertain but this is not recognizably Anglo-Saxon (pers. comm. Dr Andrew Richardson) and is potentially Roman. Whilst this item is toggle shaped its small size probably rules out its use as a toggle unless this was attaching something tight such as leather rather than something more giving such as cloth or wool. This may be a decorative terminal such as a pommel for a small knife.

Item 29. Context (2000), ploughsoil, Corner Field. Stephenson Collection. RF 2111.

Copper alloy. A complete cast decorative strap end or similar in good condition. The item is in the form of an angular loop, with five sides, elaborated with bead terminals. The attachment side is shorter than the other sides at 3.5mm interior and 7.5mm on the exterior with flanking raised moulding; the D-shaped loop at this point of attachment is thinner than elsewhere presumably to allow a binding to be lopped around it so that it did not overly project into the hollow loop. The exterior is flat on this attachment side. From this point, at a c. 50 degree angle the flanking loop lengths extend for c. 10mm and from these points the loop is then angled back at c. 50 degrees in lengths of c. 9mm to close the loop. All these sections of the loop are essentially d-shaped with the flat side on the interior. At the side and top (distal) angles occur exterior spherical beads, very

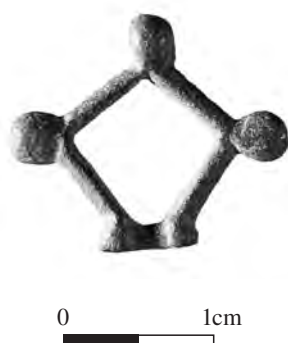


Fig. 7.17 Item 29. Decorative strap end.

slightly flattened. XRF analysis confirms that the item is copper alloy.

Overall length, including distal bead: 19.5mm, overall width including side beads: 23mm, Interior width 11.5mm, Diameter of bead terminals: c. 4mm. Weight 2.5g. Date: Roman.

This is presumably a decorative end to a leather strap or similar and on stylistic grounds Roman in date. This type of pentangular loop with knobs at angles was a popular design in the Roman era and was used for a number of items, including the grip (bow) of some Roman key types. (Fig. 7.17)

Item 52. Context (2017), a fill of Ditch [2006].

Trench Phase 2. RF 2068

Copper alloy clip. The front plate is flat and the sides taper but are broken at each end. The clip is neatly folded back on itself on each side to create the closure and in the middle, where the folds meet, they are tightly joined and then project outward to form a centrally aligned spine but the wings here are broken. Black copper oxide coats much of the front of the plate. EDXRF analysis confirms the item is copper alloy. Length (broken at top and bottom): 11mm, width at broadest: 14mm tapering to 11.5mm, thickness: 1.5mm, extant height of projection: 3mm. Weight 1g. Date: Roman.

This item is closely similar in terms of size and form to copper alloy clips from stratified Roman deposits at Dalton Parlours which likewise show typically broken ends, perhaps because the clips were fashioned from torn or roughly cut sheet metal (Cool 1990a, 89, fig. 72 nos 51-7). The tight join of the clip suggests pinching achieved by claw grip plyers.

Bone mount

Item 32. Context (1027), fill of Gully [1028]. Trench Phase 2. RF 10.

Worked bone. Part of a decorated strip, of shallow D-shape in section, broken at both ends. The underside is smooth and flat. The upper side is flattened in the middle with curving sides with a polished appearance. The edges of the sides have cut groove decoration with the grooves measuring 0.5 to 0.75 mm in width and approximately 3mm in length; they are not paired and are not particularly regular. On one side six grooves are evident and on the other there are seven indicated, though on this side they are less pronounced. The breaks are essentially irregular suggesting the item was snapped. Part of a centrally placed drilled hole is discernible at one of the broken ends and this was presumably for attachment to another item; this drilled hole may have had a diameter of c. 2.5mm.

Length: 16.5mm, width: 14mm, height: 4mm. Weight 1.1g. Date: probably Roman but could be Anglo-Saxon.

This decorated piece was probably employed as an attachment or mounted in-lay. It is likely given the curved profile that it was in-lay for a handle attached to the tang of a knife or similar tool or implement (cf. Manning 1985, pl. 53 no. Q17, pl. 54 nos Q18-Q23).

Pyramid mount

Item 42. Context (2000), ploughsoil, Corner Field, 2016. RF 30. MDSL

Copper alloy with lead component, tinned at surface (Mason 2018). A pyramidal mount, complete, bar the loss of enamel or garnet from the box setting at the apex. All four facets show the same 'chevron' design, with thin neat grooves defining a 'V' shape between the base and the sides of the panel, with triangular areas either side at the base of the V and an inverted triangular area within the mouth of the V. The grooves of the V vary somewhat in width being between 1.5-2mm. The box at the apex is square with, presently, a thin white substance coating the interior; this may be the residue of a paste or resin that had held the garnet, etc. in place or a gold leaf underlay below the garnet. A thin coat of tin is apparent across all other surfaces representing plating. A characteristic bar across the underside of the base is flanked by two cavities and in this area the tinning is more apparent, probably as it had been protected.

Black powdery residue in the grooves was examined by XRF and SEM/EDS analysis by the Physical Sciences Dept. University of Kent to establish what

this represented. The presence of sulphur for instance might indicate an original inlay of niello, a yellow decorative element that was typically inlaid within the grooves of such mounts; no such traces were detected and the black substance may be metal oxides (cf. Mason 2018).

Length of sides at base: 12-13.5mm, height: 9mm; box 3mm square and 1.5mm deep. Weight: 4.0g. Date: Probably late sixth century.

Pyramid mounts were typically employed to elaborate Anglo-Saxon sword straps, often placed as a pair either side of the position of the scabbard. They are associated with high status burials and are often in silver and sometimes gold, as seen in the Staffordshire Hoard. Silver examples can have gold leaf under-lying the garnet setting and with niello within grooves. Bases, as here, are typically hollowed. The high lead content of the present item, characterized via SEM analysis, is doubtless intentional with this leaded copper alloy an attempt to imitate silver examples if and where the plating of tin failed. Such items can occur with the burial of a sword, scabbard and belt in Anglo-Saxon graves. This example is type 1via in Mortimer's corpus of pyramid mounts, the most common type amongst his catalogue of 212 mounts known to date (pers. comm. Paul Mortimer), with 42 examples of this type reported amongst 197 'typed' mounts (Mortimer and Bunker 2019; cf. Bayliss and Hines 2013, type SW5B). (Fig. 7.18)

7.5 Objects associated with Written Communication and Commerce

Possible Stylus

Item 55. Context (1051), upper fill of Ditch [1063]. Trench Phase 2. RF 13.

Iron artefact, possibly a stylus, broken mid-stem and missing writing tip, and broken at corners of rubber terminal. As recovered the stem has been twisted and the item is corroded but stable. The identification of this item as a stylus is possible (cf. Manning 1976, fig. 21 nos 108-9). The circular stem has been flattened symmetrically to create a rubber (presuming this is a stylus), which is damaged such that there is no characteristic square end, but here a rather rounded terminal.

Overall length: 44mm, extant stem length: 31mm, extant length of rubber terminal: 13mm, stem diam.: c. 7.5mm, width of rubber: 11mm. Weight: 4.8g. Date: Roman.



Fig. 7.18 Item 42. Pyramid mount.

Seal Box

Item 26 and Item 46. Context (2000), ploughsoil, Corner Field, 2009 and 2016. RF 2057 and RF 2081. MDSL

Copper alloy. Seal box of leaf shape (Andrews 2012, P3) minus lid and hinge. Found in two conjoining parts seven years apart by Stan Little. The item is cast. There are five holes (apertures) represented, all in approximately standard positions (cf. Andrews 2012), two on the sides and three on the floor of the box. Of the latter there are two round holes at the top of the box; the one to the left is of a smaller diameter at 2.5mm and is placed slightly higher up than its neighbour which is 3mm in diameter. There is a further pierced hole towards the bottom of the box which is larger at 4mm in diameter; the box was broken at this point, across the aperture. There are two side holes (notches) symmetrically placed as the box tapers c. 3.5–4mm in diameter, and set lower down the side than the pair of top holes. The box terminal has a slender elongated appearance, tapering to a bead lobe slightly concave in its upper face. The hinge flanges show dimpled outer sides where they have been pressed in to secure the pin of the lid.

Length: 45mm, width: 18mm, height of box: 4mm, height of hinge: 5.5mm. Weight 5.8g. Date: Mid-Late Roman.

Colin Andrews writes: This is the most common type of seal box, leaf-shaped with a tapering point. Regarding this shape there is a more than 90% chance that the design consisted of a heart/leaf motif in enamel. The best dateable example I know of is c. AD 150 and they are generally a later than earlier type in the seal box typology. So this item is at least post-Hadrianic.

A seal box lid of P3 type found near Binbrook was logged by the PAS in 2016 with a seal box lid with diamond shaped design (NLM-117B5F) found at Round Hill near Hatcliffe (Chapter 10). (Fig. 7.19)



Fig. 7.19 Item 26 and Item 46. Broken seal box minus lid; parts found separately in 2009 and 2016.

7.6 Miscellaneous Metal Objects

Item 59. Context (2017), fill of Ditch [2006]. Trench B, Phase 2. RF 2004

Iron ring; as recovered, heavily corroded and fragmentary but nearly complete. Approximately square in section.

Outer diameter: c. 45mm, inner diameter: c. 33mm, width: 6mm, extant circumference c. 320°. Weight: 15.5g. Date: Roman.

Item 44. Context (2043), fill of square Scoop [2044]. Trench B, unphased. RF 2200

Iron object of uncertain identification comprising a long thin smooth shaft tapering to a point, and broken at the other end: it is quite narrow for its length. The item is corroded but is sufficiently well-preserved to indicate a carefully proportioned tapering round stem. The stem is bent around 70mm from the point and the broken end has a groove opposite a bevel suggesting it was cut through. Upon recovery surface corrosion was missing from the area of the bend whereas it was otherwise present over the object; this suggests the item was originally straight and the bend is quite recent, possibly the result of impact from a heavy excavation tool.

Diameter of stem: 5mm; extant length (bent): 96mm. Weight: 9.1g. Date: uncertain.

This item may be a tooth from a wool comb, a needle or possibly it is a stylus minus the eraser (pers. comm. Nina Crummy; cf. Manning 1976, 34, fig. 10, type I). A number of iron styli are published from Flixborough with stems consistent with this shaft (Pestell *et al.* 2009, e.g. fig. 3.2). Iron styli of the Anglo-Saxon period are derived from Roman types but to be considered a stylus the eraser head needs to be present (Pestell *et al.* 2009, 125). Alternatively this item may be an iron hair-pin (cf. Harrison 1981, 135, fig. 9 no. 1 for the same form in copper alloy) or even a prong from a rake or similar.

Item 3. Context (3517), cleaning below ploughsoil. Trench C, unstratified. RF 3505

Incomplete iron object of uncertain function but probably a bracket, perhaps for a hinge. As recovered, highly corroded but stable. The item is a strip, wedge shaped in section, which may once have been both a longer and broader item but is now split along its long axis. The 'outer edge is thicker and more or less straight but for one slight concave dip along the edge while one end curves slightly before a break. The 'inner' edge could be broken laterally but corrosion and cleaning make this unclear, and there are two half-moon perforations occurring 31mm apart and 9mm long

by c. 6mm in depth, with traces of another; currently in the form of semi-circles, if this item is one side of a split these may have been circular perforations. The perforations have been pushed through the metal, with a suggestion of being counter-sunken punches and probably not for a human handgrip; rather these look like counter-sunken hollows to receive nails. The other end of the object tapers to a break.

Length: 91mm, max. width: 11mm, max. thickness: 4mm. Weight: 12.4g. Date: Roman or Medieval. The material type, size, perforations and curving end suggest this is potentially part of a medieval horse shoe (cf. Goodall 1992, 160, fig. 82). Identification as a horse shoe would fit with its context of recovery and may be explained by its find-spot being very close to the present Hatcliffe road, which perhaps overlies an earlier, post-Roman track or routeway. However, it does have a rather straight side, and it is more likely that it is part of a hinge fitting or another type of bracket fitting, such as the hinge bracket from Dalton Parlours (Scott 1990, 97, fig. 76 no.9). Cleaned and conserved by Jenny Jones at Durham University Archaeological Conservation Lab.

Item 10. Context (3715), ploughsoil, Corner Field, 2014. RF 2075. MDDP

Copper alloy nail; complete, with sub-rectangular head slightly domed. The shaft is square in section, ending in a point.

Length (bent through 80° from vertical): 46mm, head: 7 x 6mm. Weight: 3.2g. Date: Potentially Roman. Copper alloy nails of this type have been recorded at various Roman sites. At Colchester they occur in Roman deposits (e.g. Crummy 1983, 115, fig. 117) while an example, 38mm in length, from Reculver (Philp 2005, 168, fig. 57 no. 333) is a close parallel. A use in furniture or internal household fittings is possible.

7.7 Modern Small Finds

7.7.1 Metal items

Item 37. Context (2000), ploughsoil, Corner Field, 2010. RF 2077

Copper alloy key. Small rotary key with plain bit and hollow circular stem. The handle (grip) is circular and sub-rectangular in section. There is a moulded projection off the loop, opposite the stem, with a rounded terminal. The bit is near rectangular with a slight inturned curve on both its proximal and distal edges (i.e. curved towards loop).

Overall length: 28mm, exterior width of handle: 11.5mm, interior width of handle loop: 8mm, diameter

of stem: 4mm, bit: 7 x 6mm. Weight 3.9g. Date: probably Post-Medieval.

Head knob projections as on this item occur on Roman keys while hollow stems are also a feature of Roman rotary keys (cf. Mould 2011, pl. 31). Nonetheless, unsophisticated key types such as this have changed little since that period and this simple form is most likely a draw or modest box key of post-Medieval/Modern date.

Item 50. Context (2000), ploughsoil, Corner Field, 2016. RF 2074

Iron lock plate with copper alloy coating. This tiny plate was fashioned for a lock receiving a very small rotary key; complete. The plate is thin and tapers from the top of the plate to the base, which has a rounded terminal. The shoulders at the head are likewise rounded and the heads of two rivets at the top of the plate are corroded onto the plate, and broken at the junction with their stems. The opening for the key is of 'key-hole' form, with an upper circular opening to receive the key stem. This opens below to a slightly elongated lower smaller opening to take the key bit.

Length: 16mm, max. width: 12mm, thickness c. 0.7mm. Length of opening for key: 7.5mm, width for key stem 5mm, width for key bit: 3mm. Weight 0.6g. Date: Modern.

The date is established as machine manufacture is apparent. This item seems likely to relate to a small purse, perhaps for a child.

Item 35. Context (2000), ploughsoil, Corner Field, 2014. RF 28

Copper alloy strap terminal or pendant, largely complete. The item is a circular emblem with a suspension loop. The emblem is not particularly distinct; a part of the outer edge of the flan is missing on the right side. It has been impressed or struck and is now corroded. An outer border encloses a wreath or dot ring, more discernible on the left side than the right; an inner ring contains the central (main) element of the design in comparatively high relief, but what is represented is unclear though it might be a stylized head. The underside has an irregular depression beneath the central area of the emblem suggesting removal of metal or occurring as part of the moulding action. The loop is angular consisting of three bars; the top bar being straight with side bars angled symmetrically inwards to join the flan.

Diameter of emblem flan: 17mm, height of flan at edge: 1mm, height at centre: 3mm, length of top bar: 12.5mm, length of side bars: 5.5mm, width of bars: 2mm, height of bars 2mm. Weight: 2g. Date: Post-Medieval?

Item 36. Context (2000), ploughsoil, Corner Field, 2014. RF 2115

Copper alloy union seal. A bobbin shaped union junction or seal with projecting broken wires. The bobbin is formed of two circular discs at the top and bottom and probably comprises of two components pressed symmetrically together to hold in place substantive wires that are sandwiched between them. On both faces of the circular discs there is a central raised bead and two concentric ridges, one at the circumference and the other at a mid-point which is higher than the outer ridge. One side shows wear. Four broken wires, circular in section, project from below the discs under which they have been threaded or otherwise arranged to be held in place. The breaks of the wires vary in detail; one is rounded and smooth but two are angular suggesting cutting or chopping through.

Diameter of discs: 10.5mm, overall height: 5.5mm, diameter of wires: c. 1.5-2mm. Weight: 3.2g. Date: Modern?

Item 4. Context (2000), ploughsoil, Corner Field, 2010. RF 2083

Copper alloy over an iron rod/shank being a probable curtain-tie or furniture fitting. This item is a precisely fashioned balustrade-like stem between a point of attachment and a presumed decorative terminal. An iron rod seems to run through the centre of the item, or, less probably, the item is mainly iron and coated. This item has a tapering body above a bead moulding. Projecting beyond the copper alloy stem at the narrower end is a square-sectioned iron moulding for an attachment.

Length: 36.5mm, diameter at base: 16.5mm, distal terminal: 4.5 by 4.5mm. Weight 13g. Date: Post-Medieval

A similar item with a baluster shaped body but likewise square mouldings at its tapered end comes from a mid-Roman context from Site G at Culver Street, Colchester (Crummy 1992a, 201, fig. 5.65 no. 1984), though the latter is longer at 57mm. Winterton villa, North Lincolnshire, has produced two copper alloy moulded fittings, one with an iron shank, the other copper alloy, which are similar to the Hatcliffe Top item (Stead 1976, 214, fig. 113 nos 129 and 130) but at Winterton there is a clear rounded terminal whereas the Hatcliffe item has the shank continuing at its narrow end perhaps as a closing knob or similar has been lost.

An item of closely similar form, likewise with copper alloy over an iron shank, was recovered from ploughsoil during work for this Project at Otby Top in September 2012, also via metal detecting. This item

was longer at 47mm, with a base diameter of 19mm and weighed 18g. Whilst the form suggests this item from Hatcliffe Top, and its near parallel from Otby Top, could be the stem of a handle minus knob-end or a key stem, a more likely identification is that this is a post-medieval curtain tie lacking its terminal. A similar item from Hampshire on the Portable Antiquities Database has a stylized eagle terminal and is suggested to be an eighteenth to mid-nineteenth century curtain tie (HAMP-CC6185: I am grateful to Dr Adam Daubney for suggesting this parallel). The stem will have served for winding round and tying a curtain cord, or for attaching a curtain-retaining loop.

7.7.2 Clay Pipe

Context (5000), topsoil, Trench E

A fragment of white clay pipe stem from Trench E was the only clay pipe fragment recovered during the fieldwork.

Extant length: 32.5mm, diameter of stem: 7.5mm, bore 2mm. Weight: 3g.

7.8 Items related to Construction: Iron Nails

7.8.1 Incidence and typology of the Roman nails

Some 75 Roman nails or parts of Roman nails were recovered in the course of the excavations, with a number of likely post-Roman nails being present in topsoil/ploughsoil deposits within the trenches. Other nails collected during metal detecting of the ploughsoil in Corner Field in the course of the Project have not been listed given their uncertain date even though most are evidently handmade; an exception are three nails from west of the modern quarry by Trench E which on typological attributes are likely to be Roman. Roman nails were encountered in stratified deposits at all five of the main trenches (i.e. discounting Trench F) and through the sequence of Roman period activity. As regards typology the nail from (3001), for instance, looks to be typical of the nails from these Roman era deposits. These Roman nails can have particularly large heads while their craft production origin is testified by the hammered shanks, almost invariably square in section. A high degree of standardization is apparent in this assemblage, despite hand-manufacture. Examples are consistent with the 'typical examples' catalogued by Manning (1976, fig. 11, types 1a and 1b, fig. 25,

e.g. 157-9, 165-7, 170, fig. 26 173-5; 1985, 134-5, pl. 63 R84-87 and R88-92, with the latter less frequent at Hatcliffe Top). McLaren noted head sizes up to 20mm across amongst the similar sized assemblage from Fisher Street, Carlisle, (2012, 130); though several heads from Hatcliffe Top exceed this measurement most are less than 21mm across. There is a noticeable propensity for the Roman nails (i.e. the nails in Roman period contexts) to be more encrusted with corrosion products than nails from the topsoil/ploughsoil (e.g. the nail from (3500) and both the nails from (3510)); a number of possibilities might explain this pattern. A further characteristic is that very few nails are complete; some nails will have broken in antiquity, whilst the impact of corrosion over centuries has taken a toll, coupled with the impact of removal from soil environments via excavation leading, even in the short term, to spooling and splitting here, as is so often the case (see Manning on 'taphonomy' and measurement (1985, 135)). Where there are larger assemblages with many more intact examples the possibility arises for measurement within precise categories, (i.e. of length) which may provide information on whether there were standard lengths being produced, variables which may relate to purpose and functional use (cf. Vanhoutte 2018, appendix 22, 329-34).

Typical for the present times a large proportion of the nails were located with the assistance of a metal detector. Trench C yielded the most nails (31) which is in line with the size of the trench and the number of deposits excavated. Trench D produced 18, just one more than the smaller trench, A (17). Trench A had richer deposits than D per volume generally so this is in line with the general frequency of finds per area. The same is true of Trenches B and E, which were broadly less prolific in terms of deposits and finds and in the case of B only the ditch fill (2017) yielded examples while only one Roman nail came from Trench E. Just one small nail fragment was present in the various excavated medieval furrow fills across the site, which is notable given the volume of soil excavated from these features, but the fact this was a small fragment, very likely to be Roman, is consistent with the machined nature of residual Roman pottery and animal bone in the contexts of this type. The more complete Roman nails are quite substantial and can be compared with some of the more moderately sized modern nails from the ploughsoil in Corner Field (e.g. comparison of the scale of the nails from (2017) with those from (2001); in contrast the two from (2026) look typologically similar to those from (2017), that is to say, Roman). Whilst likely Roman nails were recovered during the metal detecting from across

the field lack of certainty in the identification means they are not listed here (cf. Table 7.2), the only exception being the three likely Roman nails from near Trench E. Besides, the collection of iron nails from the field by this means was not a priority.

Considering their incidence by trench, the majority of stratified nails at Trench A came from the later Roman ditch sequence at the eastern edge of the trench, which contained the largest deposits within the trench, with comparatively frequent finds in general. Nails were also present in the earliest deposits at A (1024) and (1050) though these are likewise mid-Late Roman layers. Of the 15 stratified nails from Trench A there was no trend in the straight vs bent shanks (i.e. extracted or 'failed' upon insertion items). The only stratified nails from Trench B, from ditch fill (2017), comprised parts from four substantive nails, only one of which remained largely intact. Nails from the ploughsoil at Trench B (2001) are generally in poor condition and include three to four small nails that could be Roman but are probably modern and only two are sufficiently complete to suggest standard larger Roman examples. It may be significant that Trenches B and C were by the present, and longstanding, field boundary where fencing may have been in use at some stage, perhaps explaining more modern nails in the topsoil (though now the field has a hedged boundary).

Turning to Trench C there is a fairly even distribution across the Trench with little in the way of concentrations. The Phase 2 cobbled walkway yielded four or five Roman nails, its metalling including a range of cultural debris as well as stone, while the Late Roman ditch [3718] produced three nails. Recovered wood with nails seems not to have been much used for fuelling the flues and ovens at Trench C judging from the lack of nails from these features. The pattern is not necessarily repeated at Trench D where the ovens and debris are on a larger scale. There might be reason to believe that recovered wood was used as fuel at this location as there were five nails from the thick bands of sooty material, seemingly the rakings of spent fuel from the large ovens at this location. Another came from the Flue (4061) and four from the stoking pit fill (4019), though the latter could relate to steps or something structural related to the oven, and in that connection it is worth noting that the largest flue at Trench C also produce a nail (from (3055)), so these finds may relate to fuelling or superstructure at the larger ovens. The ditch cut [4021] which is early in the sequence at this location, and mid-Late Roman, yielded a nail, but this was from its uppermost filling (4012). At Trench E a single stratified nail was recovered, coming from the recut mid-Late Roman Ditch [5003], so essentially contemporary with fill (4012).

Table 7.2 The iron nails from the fieldwork at Hatcliffe Top.

Under 'Head Present' N means not present, I means incomplete and the number means the head is present and this number is the maximum measurement across the head; under 'Head Form' R means rectangular, S means square (often with a slight dome), C means circular, and SS means sub-square (neither square nor circular), while U means uncertain; under 'Shank' Y means present and N not present; under 'Shank Form' S means Square in section, R means rectangular, C means circular, SS means sub-square and U means uncertain; 'Length' means the extant length of the shank and under Length b means 'fresh break' other part not recovered, C means complete, NC means near complete and P means the point of the nail is obviously extant; 'Condition' means current state of preservation at time of recording, with U meaning uncertain. Angle records whether the extant shank is straight and where the shank is not straight; re the latter the angle at which the shank is turned is recorded in degrees, though if the shank is incomplete uncertainty must remain regarding this question of straight or angled. Pale grey denotes certain or likely modern nails, plus undiagnostic examples.

Context	Context Date	Head Present	Head Form	Shank	Shank Form	Wt (g)	Length (mm)	Condition	Angle re 90°
Trench A (Aggregate of Roman nails: 17)									
1001 Ploughsoil within Trench	Modern	23	C	Y	S	18g	33	Moderate	20
Probably modern Modern floorboard nail		N	-	Y	S	11g	68	Poor	45
		7	C	Y	S	4g	35	Moderate	30
		13	R	Y	S	8g	52	Moderate	St
1004 A fill of Gully 1009/1046	Roman	17 N	SS -	Y Y	S S	16g 15g	58 67	Moderate Poor	St 45
1024 Part of Layer 1050/1054	Roman	17	S	Y	S	8g	27	Good	10
1031 Fill of Ditch 1068	Roman	17	SS	Y	S	8g	23	Moderate	20
		14	S	Y	S	6g	16	Moderate	St
		12	SS	Y	S	7g	56	Poor	45
		I	-	Y	S	4g	13	Poor	St
1047 A fill of Ditch 1048	Roman	I	SS	Y	S	10g	43	Moderate	>90
1050 Layer	Roman	15	S	Y	S	4g	13	Poor	St
		I	-	Y	S	7g	23	Poor	St
1051 A fill of Ditch 1063	Roman	15	S	Y	S	18g	64	Moderate	20
		N	-	Y	S	3g	31	Poor	U
		N	-	Y	S	1g	24	Poor	St
		N	-	Y	S		35	Poor	St
1061 Fill of Ditch 1062	Roman	N	-	Y	S	5g	39	Moderate	St
Trench B (8)									
2001 Ploughsoil within Trench	Modern	10	S	Y	S	3g	23	Medium	St
		I	S	Y	S	2g	11	Medium	35
		I	U	Y	S	3g	26	Poor	St
		I	?	Y	S	3g	32	Poor	St
		N	-	Y	S	2g	25	Poor	U
		N	-	Y	S	4g	52	Poor	90
		N	-	Y	S	3g	34	Medium	St
		N	-	Y	S	3g	29	Poor	St
		N	-	Y	S	2g	21	Poor	St
		N	-	Y	S	16g	90	Poor	>90
		7	S	Y	S	2g	23p	Poor	10
		N	-	Y	S	2g	32	Poor	20
		N	-	Y	U	3g	33	U	St
		N	-	Y	S	6g	46	Poor	10
		I	S	Y	S	3g	29	Poor	St
		7	R	Y	S	2g	21c	Moderate	St
7	R	Y	S	2g	25nc	Good	St		
2017 A fill of Ditch 2006	Roman	21	SS	Y	S	13g	50	Moderate	St
		24	C	N	-	7g	-	U	-
		23	C	Y	S	7g	9	Moderate	(St)
		N	-	Y	S	2g	33	Poor	St
2026 Ploughsoil W. end of Trench	Modern	29	C	Y	S	12g	49	Moderate	St
		15	Half C	Y	S	10g	15	Moderate	U
Trench C (31)									
3000a Topsoil/ Ploughsoil at W. end of Trench	Modern	N	-	Y	S	21g	50	Poor	St

Table 7.2 The iron nails from the fieldwork at Hatcliffe Top (continued).

Context	Context Date	Head Present	Head Form	Shank	Shank Form	Wt (g)	Length (mm)	Condition	Angle re 90°
3001 Ploughsoil E. end of Trench	Modern	22 6	S S	Y Y	S R	10g 1g	37 15	Moderate Moderate	45 A tack
3003 Ploughsoil W. end of Trench	Modern	29 P N	SS ?S -	Y Y Y	S S ?S	26g 4g 2g	61 19 32	Poor Poor Poor	15 St 10
3004 A fill of Ditch 3027	Roman	N	-	Y	S	10g	58	Heavily corroded	5
3007 Fill of Furrow 3021	Medieval	N	-	Y	S	2g	15	Moderate	St
3030 Fill of Pit Cut 3025	Roman	26	R	Y	S	10g	18	Moderate	30
3055 A fill of Oven 3050	Roman	N N N	- - -	Y Y Y	S S S	6g 6g 15g	38 41 53	Very Poor Moderate Poor	15 St St
3500 Path Surface	Roman	25	R	Y	S	15g	53	Moderate	St
3502 Path Surface	Roman	N	-	Y	S	3g	32	Poor	St
3505 A fill of Ditch 3718	Roman	N	-	Y	S	6g	30	Moderate	St
3506 A fill of Ditch 3718	Roman	N	-	Y	S	9g	40	Poor	St
3509 A fill of Flue 3511	Roman	N	-	Y	S	6g	37	Poor	75
3510 Path Surface	Roman	P 20	SS SS	Y Y	S S	20g 10g	64 27	Moderate Moderate	15 St
3549 Path Surface	Roman	N	-	Y	S	3g	34	Moderate	40
3700 Ploughsoil W. end of Trench	Modern	N N N N N 10 24 10	- - - - - S R R	Y Y Y Y Y Y Y Y	S S S S S R S R	2g 2g 3g 4g 1g 1g 11g 10g	28p 27 23 34p 22 13 25 75	Good Moderate Moderate Moderate Poor Moderate Moderate Poor	5 40 15 St 10 25 St St
Modern floorboard nail									
3707 A fill of Ditch 3718	Roman	21 20	SS R	Y Y	S S	6g 10g	8 51	Good Good	S 20
3710 Fill of Flue 3739 (nail?)	Roman	N	-	Y	S	4g	25	Poor	15
3711 Fill of Gully 3719	Roman	I	-	Y	S	6g	36	Moderate	70
3712 Cleaning over Surface 3740 and Flue fill 3743	Roman	I	SS	Y	S	12g	63	Moderate	5
3723 A fill of Ditch 3718	Roman	N	-	Y	S	19g	58	Moderate	10
3724 At surface of Natural	Top of Natural	N	-	Y	S	1g	21	Moderate	St
3762 Fill of Ditch 3763	Roman	16	R	Y	S	7g	25	Good	10
3770 Fill of Ditch 3771	Roman	N N	- -	Y Y	S S	9g 5g	44 30	Moderate Poor	St St
Trench D (18)									
4000 Ploughsoil within Trench	Modern	19 14 N N 10 I	S S - - C U	Y Y Y Y Y Y	S S S S C R	20g 7g 5g 3g 8g 3g	64 52 37p 32p 10 22	Moderate Moderate Moderate Moderate Moderate Moderate	St St St 10 St St
Likely Modern									
Likely Modern									
4002 A1 Layer	Roman	N	-	Y	S	7g	60p	Moderate	40
4002 C1		N	-	Y	S	2g	40p	Moderate	St
4002 C2		N N	- -	Y Y	S S	5g 6g	36 38	Poor Poor	St 50
4008 A fill of Ditch 4031	Roman	19	SS	Y	S	11g	39	Moderate	St
4012 A fill of Ditch 4021	Roman	N	-	Y	S	7g	45	Moderate	St

Table 7.2 The iron nails from the fieldwork at Hatcliffe Top (continued).

Context	Context Date	Head Present	Head Form	Shank	Shank Form	Wt (g)	Length (mm)	Condition	Angle re 90°
4016 Fill of Cut 4079	Roman	21	C	Y	S	13g	56	Moderate	St
4017 A2 Layer	Roman	N	-	Y	S	15g	51	Poor	St
4019 Fill of Stoke Pit 4062	Roman	18	SS	Y	S	11g	58	Good	St
		N	-	Y	S	14g	60	Poor	40
		N	-	Y	S	5g	27b	Poor	15
		N	-	Y	S	5g	29b	Poor	15
4038 Layer	Roman	N	-	Y	S	6g	36p	Poor	St
4061 A fill of Flue 4086	Roman	23	SS	Y	S	10g	22	Moderate	7
Trench E (1)									
5000 Topsoil within Trench	Modern	N	-	Y	SS	11g	55	Moderate	40
5011 A fill of Ditch 5003	Roman	N	-	Y	S	3g	31	Moderate	St
Corner Field (3)									
2000 Ploughsoil by W. fringe of quarry & Trench E	Modern	14	SS	Y	S	9g	38	Moderate	St
		17	SS	Y	S	9g	25	Poor	St
		N	-	Y	S	3g	41	Moderate	St

7.8.2 Discussion

Until recent years nails, as with oyster, other shell, and tile, were often dismissed as ‘expected’ and of low significance, and they were neither reported nor studied. Their informative potential is now more widely acknowledged. The most important deduction from this presence of nails of Roman date at Hatcliffe Top is that there was evidently a common use of nails in the mid-Late Roman period at the site, and they were evidently a normal part of constructional undertakings. This cannot be taken as given as some sites yield few examples: the recently excavated villa site at Ingleby Barwick, Stockton-upon-Tees, being a case in point (McLaren 2013). Higham reported modest aggregates from two Romano-British farmstead sites excavated in Cumbria, 25 at Penrith and 7 from Sillioth (Higham 1983), and similarly only one came from work at Grey Hill, Bewcastle, Cumbria (Wooliscroft *et al.* 1989). Kilbride-Jones (1938) reported only 6 present at Milking Gap, Northumberland, but that was during the pre-metal-detecting era. Nearer to Hatcliffe Top just eleven Roman nails came from the work at Burringham Road, Scunthorpe (Boyer *et al.* 2009, 58) which encountered similar archaeological remains to the present site. Contrastingly 810 nails were recovered from the Roadside Settlement site at Shiptonthorpe, East Yorkshire (Millett 2006), the high number largely explained by the full excavation of a large aisled building of later Roman date and its compound.

Overall the wide occurrence of nails across the excavated trenches (Fig. 11.8) reflects the general distribution of the Roman period finds and does not point to any particular proximity of Roman buildings, any more so than do the other finds types. For comparison, a total of 49 nails came from Trench J at Nettleton/Rothwell where a substantial mid-Roman building was present (Willis 2013, 5.4). The relative prominence of nails is a further indication of intensive use of the site in the later Roman period, with indications of the use of nails in the mid-Roman period, judging from the examples from the mid-Late Roman ditches. Straight nails are likely to have been left in wood (that has not survived) or were unused. Possible use of reclaimed wood (with nails therein) as fuel with the larger flues/ovens at Trench D is quite possible. A proportion of nails have bent shanks suggesting failure at the point of attempted use, or extraction from timbers for reuse. It is improbable that such nails will have travelled far across the site from where these events occurred as recycling of nails is generally thought to be unlikely given they cannot be readily forged into other objects. Some nails may come from fencing adjacent to the excavated ditches and gullies (i.e. contemporary with these cuts) as well as from gate structures. In sum the nails at Hatcliffe Top seem likely to represent a habit of employment of iron nails around the site for various constructional uses during the Roman era.

7.9 Items related to Construction: Roman Ceramic Building Material

A small number of fragments of Roman Ceramic Building Material (CBM) were recovered from the site (Table 7.3). This amounted to 53 pieces weighing 5.230kg, with an average weight of 98.7g. From the excavations the 51 pieces had an average weight of 99.8g, which may be compared to the average weight for this material at the Nettleton/Rothwell site of 46.5g. All five of the main trenches produced examples with a fairly even, thin, spread of occurrence. As only small numbers of fragments were present it was not considered worth undertaking detailed fabric analysis. Given that only two pieces were recovered from the field surface, away from the trenches, throughout the entire programme of study, and there was no concentration or clustering in the trenches, it is improbable that there was a ceramic tiled Roman building in the area of the field. Had there been a tiled building much more CBM would have been expected, even if the roof tiles had been systematically removed for re-use elsewhere, as fragments left following breakages and other discard are likely in such cases. It is an observed phenomenon that Roman roof tile is often disproportionately well-represented in ploughsoils where abandoned and collapsed tiled buildings had stood, with subsequent ploughing-in of these late horizons (cf. Gaffney and Tingle 1989, 98-100 and 153-6). The low frequency of Roman roof tile in the ploughsoil at Hatcliffe Top is telling in this respect. The composition of the CBM is, moreover, also instructive. There are no examples of imbrex tiles, rather the assemblage comprises mainly of tegulae with a few examples of bricks and box-flue types. It would appear that 'flat' tiles, bricks and block-like forms (if the box-flue tiles were intact) had been sought out and employed. This was probably related to their convenience in forming small, not necessarily permanent but portable, structures, such as hearths or fire surrounds or for paving or surfacing at thresholds, at a location where immediately available stone types were unsuitable for most structural purposes (cf. Mills 2013, 585). Some fragments are, indeed, burnt, while broken brick was included in the path surfacing at the western end of Trench C, where along with other coarse material it was pressed into service; (the brick fragment from [3713] in the adjacent Furrow [3720] may well have been dislodged from this surface). It is possible these tegulae, bricks and box-flue tiles were acquired directly or indirectly from another site (perhaps an abandoned site) and brought to Hatcliffe Top or re-marketed to the site in the Late Roman

period. This is implied by the example of a tegula flange with mortar traces, since no Roman mortar is otherwise known from the site, and the fumed interiors of three of the five box flue fragments, implying these items had once been in use on and within a tiled and heated building/s. Tile production might well have ceased before the mid-fourth century in this part of the East Midlands and if so, acquisition of fresh material would have been difficult, if not impossible.

Roman CBM was often overlooked by archaeologists in the recent past as commonplace or as something without much significance. It is now more widely appreciated that tiled roofs (as with heated rooms) represented a serious investment of wealth but also a cultural statement or reflection of alignment with Roman practices; or if not used, an adherence to vernacular materials, even for rectilinear buildings (Willis 2013, 5.3.2). Presuming there was a building or buildings within or by the area of Corner Field the explanation for the absence of much Roman CBM may be one of the following: a reflection of limited wealth available at the site, cultural choice, or indeed chronology, if the tile production industries were in decline in Britain in the fourth century. Several other sites of the Roman era on the Wolds and on the Marsh lack much CBM (cf. Section 11.7.6).

CBM is present through the sequence at Hatcliffe Top. Fragments occur in two contexts dated to the mid-to Late Roman period, (1050) at Trench A and (3041) at Trench C, being amongst the earliest deposits encountered; no examples, however, came from the mid-to Late Roman ditch fills at Trench D and E (cf. Table 7.3). It is present amongst the latest Roman deposits at Trenches A, B, C, D and E, though those pieces could be residual.

A few further aspects of the material can be noted. The two pieces of CBM from the ditch fill (3707) of Ditch [3718] were found together within that fill on the side of the ditch, immediately adjacent to the Stoking Pit/Flue [3781] of Phase 3. They may have been used in the structure of that oven and eroded out as this feature was cut by Ditch [3718]. One is a box-flue fragment and there is some resemblance with a box-flue fragment from Gully [3719] of Phase 3. Both have interior fuming, neither is combed nor keyed on the basis of what is represented; these appear to be from different tiles but from the same source given their fabric and attributes.

Conjoining small fragments from the same tegula where recovered from contexts (2017) and (3005) some 25m apart. This is a reminder that items may have been dispersed by various means away from their point of use or place of customary use and

Table 7.3 Catalogue of the Roman CBM recovered from the Trenches and surface of the ploughsoil at Corner Field. Key to abbreviations of type details present: (A) angled cut-away present, (F) flange or flange break present, (G) groove before flange present, (S) signature/tally groove present, (C) combing present, (R) internal right angle (in the case of box-flue tile); (T) denotes the thickness (height) of the Roman brick fragments.

Context	Phase within trench	Context type	No. of Frags	Weight (grams)	CBM Type	Condition
Trench A						
1050	Phase 1A	Layer	1	153	Tegula	Interior fuming
1004	Phase 2	A fill of Gully [1009]	1	92	Tegula (F)	
1031	Phase 2	A fill of Ditch [1068]	1	105	Tegula (F)	
1047	Phase 2	A fill of Ditch [1048]	1	92	Box-flue (C)	
1003	Medieval	Fill of Furrow [1076]	1	21	Tegula	
1007	Medieval	Fill of Furrow [1076]	1	133	Tegula	Abraded
1001	Modern	Ploughsoil within trench	1	148	Tegula	
Total from Trench A			7	744		
Trench B						
2017	Phase 2	A fill of Ditch [2006]	1	83	Tegula	Conjoin. Join fragment from (3005)
2017	Phase 2	A fill of Ditch [2006]	2	36	Tegula (F)	
2017	Phase 2	A fill of Ditch [2006]	1	1	CBM	
2001	Modern	Ploughsoil within trench	1	23	Tegula (S)	
2001	Modern	Ploughsoil within trench	1	23	Tegula	
2001	Modern	Ploughsoil within trench	1	13	Tegula	
2026	Modern	Ploughsoil w. end of B	1	92	Tegula (F)	
2028	N/A	Cleaning	1	1	CBM	
Total from Trench B			9	272		
Trench C						
3041	Phase 1	A fill of Flue [3050]	2	100	Tegula	Conjoin
3500	Phase 2	Path surfacing	1	735	Roman brick	(T): 47mm
3502	Phase 2	Path surfacing	1	448	Roman brick	(T): 42mm
3502	Phase 2	Path surfacing	1	141	Roman brick	(T): 40mm; burnt
3510	Phase 2	Path surfacing	1	16	CBM	From brick?
3711	Phase 3	A fill of Linear [3719]	1	183	Box-flue	Interior fuming
3045	Phase 3-4	A fill of Linear [3026]	1	414	Roman brick	(T): 37mm
3707	Phase 4	A fill of Ditch [3718]	1	257	Box-flue	Interior fuming
3707	Phase 4	A fill of Ditch [3718]	1	345	Tegula	Burnt
3709	Phase 4	A fill of Ditch [3718]	1	2	? Tegula	
3713	Medieval	Fill of Furrow [3720]	1	163	Roman brick	
3713	Medieval	Fill of Furrow [3720]	1	2	? Tegula	(T): 38mm
3778	Medieval	Fill of Furrow [3720]	1	41	Tegula	Joins frags from (2017)
3001	Modern	Ploughsoil within trench	1	73	Tegula (G)	
3001	Modern	Ploughsoil within trench	1	11	Tegula	
3001	Modern	Ploughsoil within trench	1	2	? Tegula	
3005	Modern	Ploughsoil mid-trench	1	39	Tegula (F)	
3700	Modern	Ploughsoil w. end of C	1	57	Tegula (F)	
Total from Trench C			19	3029		

Table 7.3 (continued)

Context	Phase within trench	Context type	No. of Frags	Weight (grams)	CBM Type	Condition
Trench D						
4013	Phase 3	Fill of Gully [4033]	1	308	Tegula	Burnt
4008	Phase 4	A fill of Ditch [4031]	2	168	Tegula	Conjoin; burnt
4036	Phase 4	A fill of Ditch [4031]	1	206	Tegula (F)	Mortar on flange
4000	Modern	Ploughsoil over trench	1	94	Tegula (A)	Conjoin; burnt
4000	Modern	Ploughsoil over trench	2	45	Tegula	
4000	Modern	Ploughsoil over trench	1	25	Tegula	
4000	Modern	Ploughsoil over trench	1	12	? Box flue (R)	
Total from Trench D			9	858		
Trench E						
5001	Phase 1B	A fill of Ditch [5003]	1	33	Tegula	Non-conjoining but same tile; burnt
5001	Phase 1B	A fill of Ditch [5003]	1	18	Tegula	
5001	Phase 1B	A fill of Ditch [5003]	1	1	CBM	
5011	Phase 1B	A fill of Ditch [5003]	3	125	Tegula	
5000	Modern	Topsoil over trench	1	10	Tegula	
Total from Trench E			7	187		
Surface collection from ploughsoil of Corner Field						
2000	Modern	Ploughsoil of field	1	121	Tegula (F)	Abraded
2000	Modern	Ploughsoil of field	1	19	Box-flue (C)	Abraded
Total from Surface Collection			2	140		
Overall total for the site:			53	5230		

original deposition by various processes, coming to be deposited in contexts unrelated to their life-use nor necessarily contemporary with it. This is a normal recognized phenomenon at archaeological sites.

Equally modest quantities of CBM were recovered during the excavations at the Roadside Settlement at Mount Pleasant, Nettleton/Rothwell (which is of an earlier date than Hatcliffe Top), despite the presence of Roman buildings revealed in or by Trenches B, I and J (Willis 2013, 5.3.2). The material from that site was more fragmented; possibly the pieces from Hatcliffe Top entered the ground (features) more swiftly with less exposure to breakage/trampling. As at Hatcliffe Top the modest amount of CBM present at Mount Pleasant, together with its type-composition, indicates that these buildings, even though stone

founded, did not have tiled roofs either. By contrast the Roman farm complex currently under excavation at Brookenby (2.2.2) has produced large quantities of tegulae, imbrex and box flue tiles from survey and excavation, indicating that at this Waithe valley site these resources were part of building structures.

Looking beyond the Roman material, only three fragments from peg tiles were recovered from the topsoil and ploughsoil above the trenches, two coming from (3700) at the western end of Trench C and another from (1001) at Trench A. This low figure is consistent with the picture emergent from the fieldwalking in the adjacent fields (cf. Sections 3.6.2 and 3.6.3) and the general infrequency of post-medieval and modern detritus in the ploughsoil at Corner Field.

7.10 Quernstones and Stone Mixing Bowl

Fragments from fifteen quernstones were recovered in the course of the fieldwork, together with approximately half of a stone mixing bowl.

7.10.1 Catalogue of the Quernstones

Quern B1. Trench B, Context (2017), fill of Ditch [2006]

Rotary quern fragment from an upper stone. This is a fine-grained basaltic rock (identification: Paul Hildreth) displaying irregular fractures with hackly aspect at the post-usage breaks. Two areas of the original quernstone surface are represented from what is generally a bun-shaped example: part of the shoulder, together with an

area of the milling surface. The fragment has a domed form with a slight shoulder angle defining the side and the top; these surfaces are finely pecked and essentially smooth. The part of the extant grinding surface is flat and very smooth suggesting sustained use. Surfaces have a reddish appearance suggesting a breakdown of iron (?magnetite/ulmanite) in the parent rock (pers. comm. Paul Hildreth). Extant height: 82mm; weight: 520g. (Fig. 7.20 B1).

Quern B2. Trench B, Context (2017), fill of Ditch [2006]

Rotary quern fragment, probably from a lower stone. This is a fine grained igneous rock, probably of somewhat coarser grain-size than Quern B1, being Dolerite, potentially from the Cleveland Dyke (identification: Paul Hildreth). The fractures at the post-usage breaks are irregular but smoother than with Quern B1. Part of the grinding surface survives;

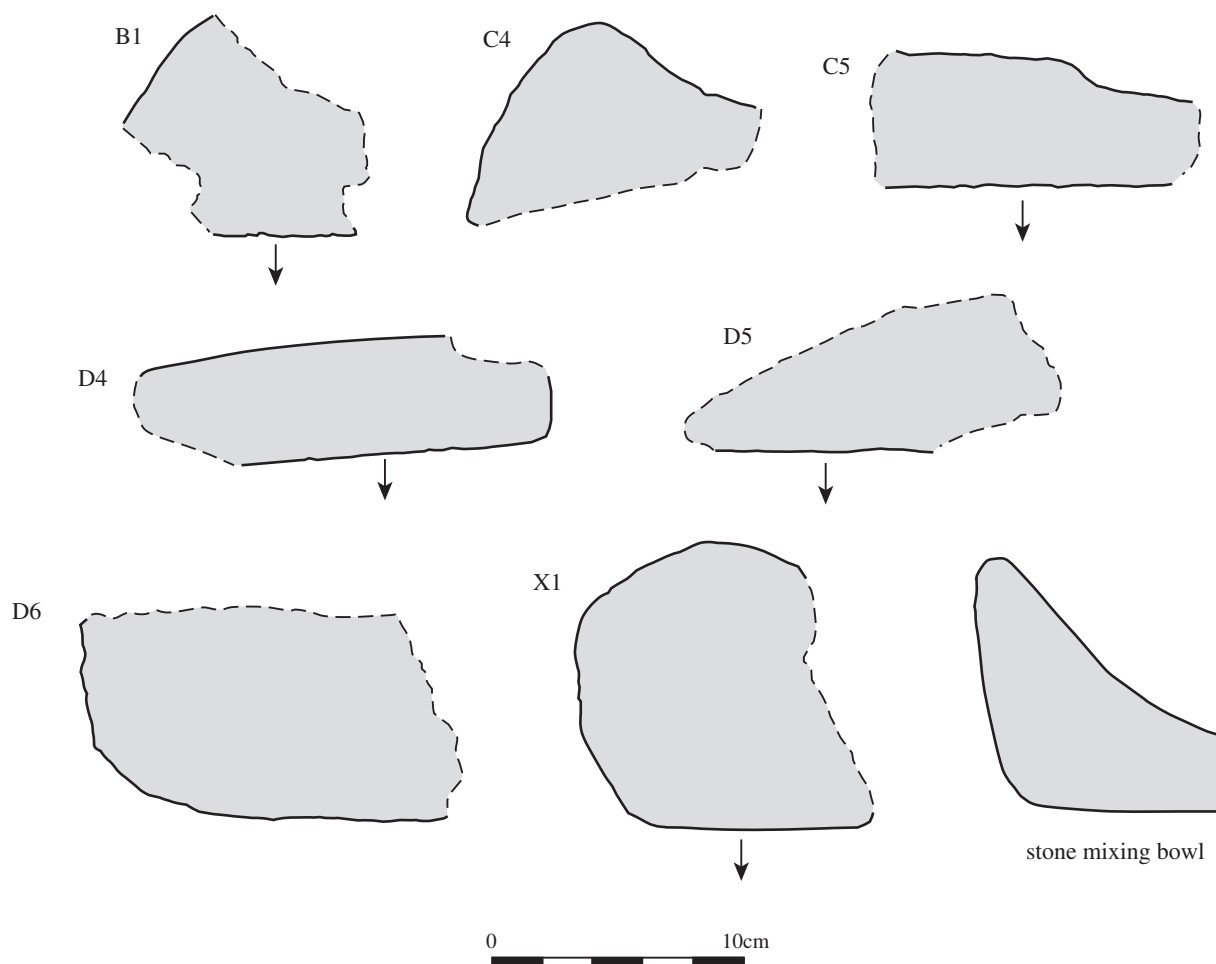


Fig. 7.20 Profiles of selected quernstones (B1-X1) and the Roman stone mixing bowl. Solid lines are original manufactured edges and working surfaces, while broken lines denote breakage. Arrows indicate working surfaces of the quernstones where they survive.

this is flat and towards the obvious outer side this is merely smooth, but further in, towards what will have been the central area of the milling surface, this is ultra-smooth, likely to be the result of use-wear. This fragment is from the side of a quernstone but there is loss of the original outer surface at the side while the lower part of the stone has broken away. Extant height: 61mm; weight: 479g. Not illustrated.

Quern C1. Trench C, Context (3502), layer forming Path Surfacing, Phase 2

Rotary quern fragment from a lower stone. This occurs in a coarse-grained sandstone resembling Millstone Grit type but could be of the Sherwood Sandstone Group from Nottinghamshire or similar (identification: Paul Hildreth). Used on both upper and lower faces, probably for milling in both cases. One side is absolutely flat and smooth, the other is also smooth but asymmetrically concave, perhaps through milling or through its reuse as a polishing or sharpening stone for horizontal abrasion/sharpening. Vertical grooves along the 'ridge-edge' suggest blade sharpening has also occurred through drawing the working blade vertically across the stone at various points. No original edges of this quernstone are represented. Around 20% of the circumference of a drilled, smooth-sided hole occurs of conical form, probably a spindle socket. Extant height: 78mm; weight: 906g. Not illustrated.

Quern C2. Trench C, Context (3725), cleaning layer, but probably deriving from (3502), layer forming Path Surfacing, Phase 2

Probable rotary quern fragments. Two small conjoining fragments in Spilsby Sandstone, this being a coarser grained example of this stone, with comparatively large glauconite and other inclusions (examined by Paul Hildreth). The fragments have flat fashioned surfaces on one side, this being pecked and smooth. No original edges are extant nor other features. Extant height: 50mm; weight: 322g. Not illustrated.

Quern C3. Trench C, Context (3742), the fill of Pit [3761], Phase 2B

Probable rotary quern fragment. Coarse grained sandstone resembling Millstone Grit type but could be of the Sherwood Sandstone Group from Nottinghamshire or similar (identification: Paul Hildreth). The fragment has one pecked, flat, smooth surface, presumably the grinding surface but otherwise the edges are broken and irregular. Blackened through burning on the working side. Extant height: 38mm; weight: 123g. Not illustrated.

Quern C4. Trench C, Context (3552), Oven, Phase 3. RF 3507

Rotary quern fragment, from an upper stone. This quern occurs in Spilsby Sandstone, resembling others found during the Wolds Project of this lithography (examined by Paul Hildreth). It has a highly regular edge descending consistently to a break where the lower part of this stone is missing. A rounded summit to the apex then gives way to a smooth dished hopper. The stone is broken before the feeder pipe is reached. Extant height: 79mm; minimum diameter 280mm, c. 22% of the circumference is represented; weight: 1312g. (Fig. 7.20 C4)

Quern C5. Trench C, Context (3758), from fill/lining of Oven Flue [3781]/[3759], Phase 3.

Rotary quern fragments, probably from an upper stone. Nineteen fragments, evidently from the same discoid item, with two fragments conjoining. Four fragments are from the edge or top, two include parts of the edge and grinding surface, three come from the grinding surface and one includes both the grinding surface and the top of the quernstone. This stone is an example of coarse Spilsby Sandstone (examined by Paul Hildreth). The grinding surface shows a slight suggestion of radial grooves, and is smooth and slightly concave. The upper surface is represented on the largest fragment (though there is no original edge represented on this fragment), being essentially flat over its outer width (a minimum of c. 73mm) but then stepped down towards the centre by c. 9mm with the inner (lower) radius (a minimum of 50mm) likewise flat. This is a known feature of querns in this stone and presumably represents a hopper. These fragments were used to line a flue which was then fired, so they have been exposed to temperature and are now disaggregating. Extant height: 53mm; weight: 1533g. (Fig. 7.20 C5)

Quern C6. Trench C, Context (3770), fill of Gully [3771], Phase 4

Probable rotary quern. Three non-conjoining fragments from the same item. New Red Sandstone; this is probably Sherwood Sandstone. This example is reddish; the grain size varies but is generally coarse and 'gritty' and is silica cemented with some mica; no calcium carbonate is present. Where there occurs some fresh breakage the stone has the distinctive appearance of salami. This stone is likely to be from the Retford area of north-east Nottinghamshire (identification: Paul Hildreth). The three pieces all have one pecked flat side, which is smooth, but otherwise no original edges occur. Extant height: 55mm; weight: 375g. Not illustrated.

Quern D1. Trench D, Context (4078), from threshold of flue in Stoking Pit [4062], Phase 2

Rotary quern fragment, probably an upper stone. This item occurs in a coarse grained sandstone resembling Millstone Grit type but could be of the Sherwood Sandstone Group from Nottinghamshire or similar (identification: Paul Hildreth). The grinding face is flat and shows clear cut radial grooves, with nine ridges extant; the fragment is too small to establish if this stone was harped. The side is straight and has been pecked smooth. There is a change of angle at the side after c. 63mm presumably as this is the beginning of the top of the stone. This quernstone may never have been used given that the grooves show no wear. Extant height: 76mm; projected diameter c. 500mm, c. 8% of the circumference is represented; weight: 684g. (Fig. 7.21)



Fig. 7.21 Quern D1

Quern D2. Trench D, Context (4078), from threshold of flue in Stoking Pit [4062], Phase 2

Rotary quern fragment, from an upper stone. This item occurs in a coarse grained sandstone resembling Millstone Grit type but could be of the Sherwood Sandstone Group from Nottinghamshire or similar (identification: Paul Hildreth). Compared to D1 it is apparent this is from a different quernstone. This fragment includes part of the top and side of an upper stone. The side is regular and straight with a pecked finish. The top is likewise but is smooth nearer the apex of this piece. There is a step, almost a groove, at the angle from the side to the top, running just above the side. The stone looks to have split and failed along a natural bedding plain. Extant height: 77mm; projected diameter as extant c. 460mm, c. 9% of the circumference is represented; weight: 558g. Not illustrated.



Fig. 7.22 Quern D3

Quern D3. Trench D, Context (4078), from threshold of flue in Stoking Pit [4062], Phase 2

Rotary quern fragment, from a lower stone. This item occurs in a coarse grained sandstone resembling Millstone Grit type but could be of the Sherwood Sandstone Group from Nottinghamshire or similar (identification; Paul Hildreth). Compared to D1 and D2 it is apparent this is from a different quernstone, coarser grained, and of a lighter red, rosy appearance. No original edges are present. The grinding surface is flat and displays worn but readily apparent radial grooves (eight ridges are represented). The lower surface is pecked and flat, fairly smooth but has itself almost certainly not been used for milling. Extant height: 52mm; weight: 567g. (Fig. 7.22)



Fig. 7.23 Quern D4

Quern D4. Trench D, Context (4078), from threshold of flue in Stoking Pit [4062], Phase 2

Rotary quern fragment, from an upper stone. This

item is an example of Spilsby Sandstone, somewhat finer grained than other examples (examined by Paul Hildreth). This stone was of discoid form. No original edge survives but both the upper and lower surfaces are represented, as well as part of the eye/feeder pipe. The eye is straight sided, smooth and cylindrical, with a diameter of c. 70mm; some c. 23% of the circumference is represented. Otherwise the edges show irregular breaks. The lower surface is concave and shows a regular series of worn radial grooves fanning

out from the eye/feeder hole; there is some trace of cross-grooves but these are fainter as they were less incised. The upper surface is slightly convex and very smooth, almost polished; this seems to be an example of high quality finishing rather than use wear of this surface. There is no evidence of a hopper. Extant height: 42.5mm; weight: 1365g. (Fig. 7.20 D4; Fig. 7.23)

Quern D5. Trench D, Context (4078), from threshold of flue in Stoking Pit [4062], Phase 2

Fragment probably from a rotary quern. This is an example of Charnwood Forest Granite, a coarse crystalline igneous rock; Pre-Cambrian syanite occurs (identification: Paul Hildreth). This is a wedge shaped fragment with no surviving original edges, though the grinding surface is represented. The latter is flat but the surface is damaged through flaking and disaggregation such that original detail is lost. Otherwise the stone has irregular surfaces where it is broken. Extant height: 59mm; weight: 1570g. (Fig. 7.20 D5)

Quern D6. Trench D, Context (4078), from threshold of flue in Stoking Pit [4062], Phase 2

Fragment probably from a rotary quern, from the lower stone. This stone is Oolitic Limestone, almost certainly from the Lincolnshire Limestone Formation, heavily fossiliferous (identification: Paul Hildreth). This is a block shaped fragment with a small section of surviving original edge with a slight curvature, and part of an original flat pecked surface; this is either the face of an upper stone or, much more likely, the under-face of a lower stone given the quality of the finishing. This surface, while flat, has been left quite rough so is not a grinding surface nor perhaps the visible top of an upper stone. Rounding of the angle between the flat surface and the side further implies this is the lower part of a lower stone where the top surface has broken (been broken) off. This surface is also stained black with soot from its reused as a threshold stone for the stoke pit and oven flue [4062]/[4058]. Extant height: 79mm; projected diameter 500mm, c. 5% of the circumference is represented; weight: 1626g. (Fig. 7.20 D6)

Quern X1. Found loose by the edge of the open chalk quarry on the north side of Corner Field south-east of Trench E, evidently having been 'thrown' off the field. RF 16

Part of a rotary quern, from an upper stone. This item is fashioned from Basalt, probably an erratic from within the Boulder Clay or moraine, with slight reaction to dilute hydrochloric acid due to feldspar breakdown (identification: Paul Hildreth). This quernstone has a flat ultra-smooth grinding floor. The extant side has two large facets which might be ancient damage rather

than represent crude 'shaping'. This contrasts with the shoulder and top which are much more regular and smooth, with a regular descending surface towards the centre, almost certainly representing a hopper or funnel to the feeder pipe. Height: 112mm; projected diameter c. 360mm, c. 18% of the circumference is represented; weight: 2276g. (Fig. 7.20 X1)

7.10.2 Stone Mixing Bowl

Stone Bowl. Trench A, Context (1060), Surfacing Layer, Phase 1B. RF 9

A dished stone mixing bowl in Spilsby Sandstone. Approximately half the vessel is represented, broken vertically across the middle (perhaps weakened by the presence of a fossil shell at this point at the base). The vessel is of simple design, well-proportioned, and has been carefully finished on the exterior, while the interior surface is remarkably smooth for a coarse sandstone, evidently the result of careful manufacture and wear. The base of the dished interior is generally no more smooth and worn than the upper sides. The rim is damaged but around 20% of the circumference is more or less intact showing that the exterior wall and dished interior come together in a rounded upright rim. At the rim, by one of the breaks, is a small cut-away section angled outwards from the bowl at c. 45°; this surface is very smooth and must be part of the original fashioned vessel, representing a vestige of the side of a spout. Height: 94mm; depth of dish: 64mm; exterior diameter: 220mm, interior: 200mm, base diameter: 180mm; weight: 2485g. (Figs 7.20 and 7.24)

This is an unusual item as stone mixing bowls or mortars of Roman date are fairly rare in Britain (Cool 2005). However, on typological grounds this is a Roman example (pers. comm. Ruth Shaffrey) and, indeed, it comes from a layer of Roman date, early in the trench sequence at A. Vessels of this type with spouts might generally be referred to as mortars rather than mixing bowls but it seems there is no precise definition of the terms. A sandstone mortar/mixing bowl with a pouring spout, ascribed a second to third century date is reported from Usk, and is of comparable size: width 236mm, height 103mm (Manning 1995, 212, fig. 60). A mortar in Folkestone Greensand is recorded from the excavations at the Marlowe Theatre, Canterbury, to which Green ascribes an early Roman date, but this is not comparable to the Hatcliffe Top bowl, having a low height-diameter ratio with a small cup shaped functional concavity (Green 2016, fig. 11 and appendix). An early Roman stone mortar in fossiliferous limestone was recovered during

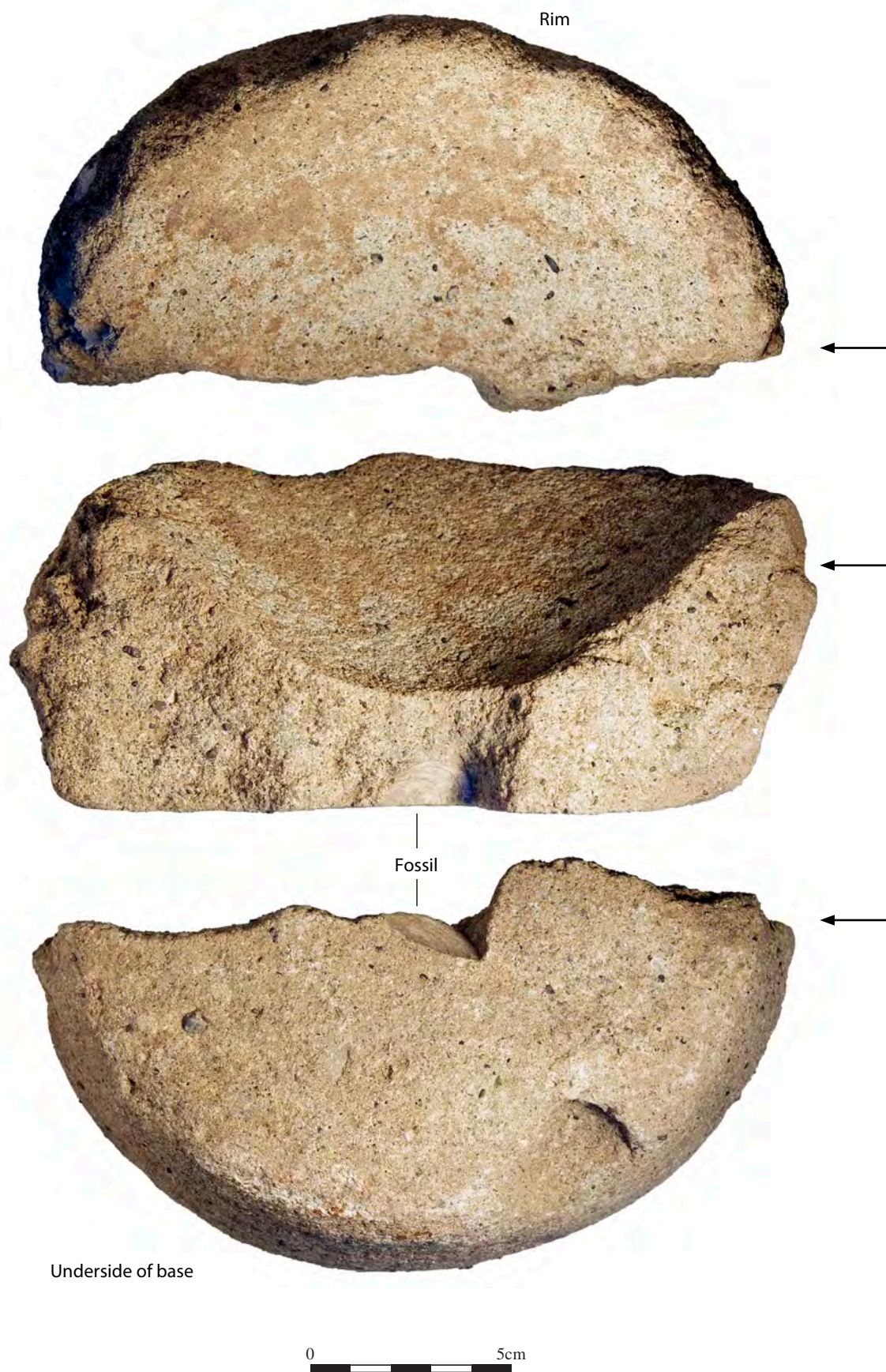


Fig. 7.24 Stone mixing bowl. The side of a spout can be seen on the right, here indicated by arrows.

excavations at the Gilbert School, Colchester; this is a much larger vessel with an interior diameter of 460mm (Crummy 1992b, 217, fig. 6.13). It is worth emphasizing that this vessel from Hatcliffe Top is not a lamp. Stone lamps of Anglo-Saxon date occur at Flixborough and whilst there is a superficial resemblance, those at Flixborough show much variance: are all fashioned from limestone, all show burning or sooting, and they are generally broader at the base than the rim, for reasons of stability (Wastling 2009b). The latter are all features that differ from the Hatcliffe Top vessel. Of note is a further stone mortar in an unspecified stone found in a 10th century deposit at Goltho, near Market Rasen. This vessel is taller with a square rim, with a broader internal floor and is said to have been used for “pounding” (Smith 1987, 196); the form is closely similar to the Colchester Roman mortar, and possibly this is residual from the Roman period occupation at Goltho. Finally, the profile of the Hatcliffe Top item is similar to that of several listed by Shaffrey in her research archive of eleven stone mixing bowls and mortars of Roman date in Britain. Some of these examples have spouts (pers. comm. Ruth Shaffrey); several vessels in her list occur in sandstone but none of these are in Spilsby Sandstone, noting that her list mainly has examples from western Britain and does not include any of the examples listed above.

7.10.3 Discussion

Lithography and Sources

Of the fifteen quernstones recorded the composition by lithography was as follows: six in New Red Sandstone, four in Spilsby Sandstone, three in Basalt or similar fine grained igneous rock, one in Limestone and another in Mountsorrel/Charnwood Granite. To these one can add the mixing bowl in Spilsby Sandstone given it too was brought to the site, is in one of the same rock types and served a similar function in terms (presumably) of food preparation.

No beehive type forms are apparent and the assemblage appears to be largely composed of flat rotary types of disc-like form, with Querns B1 and X1 an exception, and C4 a possible exception, appearing more bun-like. Seven of the quernstones are upper stones, four are from lower stones; in four cases it is unclear whether one is dealing with upper or lower stones. Gwilt also noted that topstones were in the majority amongst the assemblage from the Roman Roadside Settlement at Shiptonthorpe, East Yorkshire (Gwilt 2006, 206). As with other Roman

assemblages not only are sources varied but typology is likewise far from standardized and universal, even within the same lithographies. So whilst the Hatcliffe Top types have a low height to width ratio, finishing, edging and the presence of a hopper and types varies. Unfortunately only in a few cases could the diameter be established (and in these cases suggesting on the whole, large quernstones).

Four quernstones (C2, C4, C5 and D4) and the mixing bowl recovered at Hatcliffe Top occur in Spilsby Sandstone (identification confirmed by Paul Hildreth and in comparison with type samples). The Spilsby Sandstone beds outcrop on the western scarp slope of the Wolds from Grasby north-west of Caistor, near Nettleton, and further to the south, where they overlie the Jurassic Kimmeridge Clay. The Upper Spilsby Sandstone is the lowest strata of the Cretaceous era in the region, though its lower and main part (Lower Spilsby Sandstone) is itself Jurassic (Berridge and Pattison 1994, 25, fig. 16; Gaunt *et al.* 1992, 67-70). The Spilsby Sandstone formation is around 9-12m thick, comprising greenish-grey mottled coarse to medium sand grains with disseminated glauconite and ferruginous grits, and occasional or rare nodules, small pebbles and fossils (Heaven 1978, 2-4 and fig. 8). Sand grain size is mostly medium at 200-600 µm, but with a proportion of finer material of 60-200 µm (Heaven 1978, 4). Towards the base of the formation the strata are more fine grained and homogeneous (Berridge and Pattison 1994, 25). Often fairly soft and poorly consolidated the rock can weather easily, but this is not invariably so. It was used in the construction of Bolingbroke Castle towards the south end of the Wolds where the extant lower courses of the 13th century perimeter circuit wall show good preservation. As dressed stone forming the main fabric of the church at Old Bolingbroke the stone, however, shows some areas of marked weathering where it is exposed to the elements.

Gaunt and Wright point out that the outcrop of Greensand at Elsham known as Elsham Sandstone is lithologically the same as Spilsby Sandstone and whilst there is no evidence it was employed to make quernstones the possibility remains that it is a source of extraction and production (Gaunt *et al.* 1992, 66; Wright 1996; Gaunt 2009, 248). The Nettleton area is the preferred source according to both Ingle and Wright given that this is the area of the greatest surface exposure and where the stone is apparently at its hardest (Ingle 1994, 30; Wright 1996, 368). In addition an unfinished upper stone in Spilsby Sandstone is known from the Nettleton area, now in Lincoln Museum (Ingle 1994, 30). Of course, more

than one Wolds edge source is possible, while near the southern edge of the Wolds hard doggers of this stone may also have been exploited for quern production (cf. Wright 1996, 368). These aspects are discussed in the previous volume (Shaffrey 2013, 292).

Examination of Spilsby Sandstone quern fragments recovered at Mount Pleasant Nettleton/Rothwell, Hatcliffe Top and at other locations in the course of the Project show that the presence of comparatively large fossils can lead to fracturing following the fossil shape while the quartz grains on some examples are prone to disaggregation. Whilst as we now have them these are long exposed and weathered items, it is likely that these characteristics were present in the time of the fashioning, and use of the querns rendered this rock type far from ideal for shaping and milling. Nonetheless this was clearly a stone type heavily exploited for the production of querns, as were other greensands elsewhere in Britain at this time. In the south-east of England it was the Lower Greensand that was exploited for quern manufacture, as seen at East Wear Bay, Folkestone and Lodsworth in West Sussex (Green 2016). The Upper Greensand was insufficiently hard for this use (Riddler 2010), although Peacock noted that variability in the Lower Greensand formation meant that most exposures will have been unsuitable for producing querns. Riddler notes that the dating evidence from Ickham suggests that Greensand querns were not made in south-east England after the second century (Riddler 2010). All four examples of Spilsby Sandstone querns at Hatcliffe Top occur in Late Roman contexts though of course these might be residual items from early or mid-Roman manufacture/usage.

Ingle has noted the variability in types occurring in Spilsby Sandstone (1994, 30), and indeed heterogeneity was apparent amongst the examples from Nettleton/Rothwell. Quern C4 has a cup shaped hopper of the type she noted amongst the querns from this source at Hunsbury, while D4 is slightly convex at the top and perhaps akin to the flat topped types she notes (1994, 30). It is possible that querns in this stone (C5 and D4) are imitating the lava quern 'flat disc' form; indeed the cross-grooving of the latter example may be another clue to imitation (cf. Gwilt 2006, 218 with references).

Turning to the New Red Sandstone/Millstone Grit querns, these sandstone or gritstone types are generally very difficult to precisely source. This is a known phenomenon discussed at length by Ingle (1994) and Gwilt (2006). This is due to the common occurrence of such sandstone outcrops, especially through the Pennines, southern Yorkshire,

The Peak District and the East Midlands and their undiagnostic character. The composition of the examples from Hatcliffe Top varies somewhat in colour from rosy-grey to red speckled with white and some could readily be classified as Millstone Grit, though again that is an unspecific category (see discussion by Shaffrey (2013, 292)). These coarse grained sandstones of Millstone Grit type contrast with some finer grained New Red Sandstone types probably from Nottinghamshire. Millstone Grit is a generic name for coarse grained sandstones from the Millstone Grit Succession in the Pennines, being especially typical in the central and southern Pennines. They are, however, not firmly distinct from similar sandstones amongst the Coal Measures of Yorkshire and Derbyshire and the sandstones of Nottinghamshire, all also used to make querns. Accordingly, exact sourcing is not possible. As Gaunt states of Yorkshire and Derbyshire sources, quernstones could have been brought down any river from the Swale to the Derwent to Lincolnshire (Gaunt 2009, 246). Millstone Grit sandstones are highly suitable for milling as in use they retain a rough surface and are slow to wear (Hayes *et al.* 1980, 308). This explains the distance examples travelled in the Roman period. Querns fashioned from Millstone Grit type rock and New Red Sandstone were flat and were produced from the later first century AD to the late Roman period. Dating individual items is hindered by the lack of typological change in the form, while in the case of the examples from Hatcliffe Top, the fragments are unhelpfully small.

Quern D6 in Oolitic Limestone with a diameter of 500mm is a large example. D6 appears almost certainly to be from the Lincolnshire Limestone Formation which outcrops at the Lincoln Edge. Although quernstones could be shaped from this stone type with comparative ease the Lincolnshire Limestone is not ideal for grinding as it can wear-down comparatively quickly, even when there is a strong frequency of harder (calcite) fossil shell present. The example of a quernstone in Mountsorrel (Charnwood) Granodiorite rock (D5) is noteworthy; this has a distinctive lithography and Paul Hildreth recognized the source through personal studies of the rocks of that area.

Discussion of the context and taphonomy of the Quernstone finds

There were no surface collected quern fragments from Hatcliffe Top in the course of the whole fieldwork. This pattern is in marked contrast to their field surface recovery in the case of other sites

studied for the Central Wolds Project at Otby Top, Mount Pleasant Nettleton/Rothwell, Acre House, Mansgate 5, Churn Water Heads and Brookenby, despite the amount of intense traversing over Corner Field and the surveys of the adjacent Stable Field and Home Field+. Nor did any examples come from the hedgerows, with only one example not found in a stratified context, being the one found loose by the chalk quarry, being a likely example of 'field clearance'. This absence from the ploughsoil seems unlikely to reflect a comparative general infrequency at Hatcliffe Top given the numbers recovered from stratified deposits but might be a function of their episodic removal from the ploughsoil if obstructing tractors/cultivation. Yet, even if that occurred one might expect examples to have been missed as they were 'hidden' within the ploughsoil, or to have been more recently 'ploughed-in'. One would expect quern fragments here and there across this broad site to have been present in horizontal and abandonment deposits to be later 'ploughed-in' along with pottery and other cultural material within medieval and modern ploughsoils (cf. Haselgrove 1985, fig. 1.3), yet there were none encountered. Was that due to centuries of removal by farmers? There was, also, a complete absence of smashed fragments of Spilsby Sandstone within the modern ploughsoil, a phenomenon seen at other sites on the Wolds where such fragments are likely to have come from quernstones and pieces of quern hit by the plough.

An absence of quernstones from surface samples gathered by fieldwalking in the fields adjacent to the site (that is Stable Field and Home Field+) is not surprising. Whilst contemporary domestic refuse may well have been spread on fields via middening to become incorporated within modern ploughsoils it is unlikely that substantial pieces of broken querns would have ended up in this context, given their size and nature (cf. Lyne 2012). Rather, as Lyne points out, they would have been reused as a convenient resource. This would have been for such purposes as structural stone, to fill decommissioned features, in flooring, filling other types of depression and in the construction of features such as ovens and dryers, as at Hatcliffe Top. At Hatcliffe Top more concerted re-use due to the absence of locally available robust stone might be anticipated. In such cases a high proportion of fragments would have been incorporated into cut features or features low to the ground level and so less likely to be ploughed-up and enter modern topsoils. Hence an absence or low number of fragments of quern in ploughsoil assemblages from rural sites cannot be taken to indicate that these sites did not use quernstones to

grind corn or only occasionally employed them.

In terms of date distribution the earliest incidence in the site sequence may be the mixing bowl recovered from a Phase 1B horizon at Trench A which may be later third century (though potentially a little later). Quernstones were present in Phase 2, 3 and 4 deposits at Trench C, that is up to the latest Roman activity.

The recovered assemblage of querns was composed very largely of small fragments representing small percentages of the original parent artefacts. This limits what can be learned from the pieces, though the advanced fragmentation is of interest in itself. Gwilt noted a similar pattern with the assemblage from Shiptonthorpe (2006, 206 and 218) where he attributed it to assiduous recovery and/or intensity of occupation. Given the items were all recovered as fragments they were deposited after their original use-life. In eleven instances the fragments were then deposited as components of structures: for surfacing, or within ovens or possibly as post-packing (Quern C3); similarly the mixing bowl fragment was incorporated in the laid chalk/stone surface at Trench A, inverted. Hence in only three cases were the fragments present as secondary rubbish or stray material (Querns B1 and B2, the pieces of Quern C6 in gully [3770], plus the unstratified Quern X1). Indeed, the six fragments from the stoke-pit to flue threshold at Trench D had all been placed, with no non-quern stones laid down at this point. In this case they all appear comparatively 'fresh' and unabraded bar the Granite item Quern D5, though that too was probably 'fresh' when placed at this point and only then became subject subsequently to some disaggregation. Possibly they were broken for this purpose: to place a single piece from a larger fragment in this potentially symbolic location. A key point is that where these quernstone fragments were found cannot be a pointer to where they were used for the primary original purpose of grinding grain in food preparation. Contrastingly, at Shiptonthorpe, with its larger assemblage, but equally where few hard rocks were readily to hand in the environs of the site, a large proportion were in dump/refuse/abandonment deposits. This raises the question as to whether the quern fragments could represent collected material from abandoned earlier Roman sites nearby, which is a possibility with regard to the tile fragments. That possibility seems more likely in respect of the tiles given their portability and flexible uses; if quernstones were retrieved from other sites it would be likely given their weight and scale this was for use in milling, not simply as a structural material.

Discussion of the Quernstones within their regional context

As is now well-established, not least following research by Ingle (1989; 1994), querns made from Spilsby Sandstone are found widely at sites of Iron Age and Roman date across Lincolnshire and the East Midlands, and to a lesser degree further south, as with examples known from Essex and Hertfordshire (Ingle 1989; 1994). It is now even postulated that some examples of Greensand querns found in Kent might be from Lincolnshire rather than East Wear Bay, Folkestone.

A chronologically early example of this stone type in use as a quern is that of a saddle quern, together with a rubbing stone (for use with a saddle quern and also in this rock type), reported from the Iron Age hillfort at Breedon Hill, Leicestershire, where it is suggested they were transported as erratics or “deliberately” (King and Wachter 1964, 134). Examples of rotary querns in this stone type are known from the Ancaster Quarry site in southern Lincolnshire attributed a Middle Iron Age date, while Dragonby, in North Lincolnshire, produced beehive type examples (Ingle 1994, 30; Wright 1996). A beehive type upper stone occurs at Otby Top amongst the collection gathered by the present Project. The evidence thus confirms that production began in the Iron Age. In reporting the querns from Dragonby Wright took the view that Spilsby Sandstone querns were essentially Iron Age and were replaced in the Roman period by Millstone Grit/Pennine sources. However, the evidence from Hatcliffe Top and elsewhere suggests sustained production of Spilsby Sandstone quernstones well into the Roman era if not throughout that period. This makes entire sense as the rock is likely to have been

quarried alongside other stone types used for building in the Roman period, exposed at the same location on the Wolds edge, for which there will have been considerable local demand. Nonetheless, the incidence comparison presented in Table 7.4 suggests there may have been a rise in the frequency of Millstone Grit type querns relative to Spilsby Sandstone examples through the Roman period.

Gaunt and others note that there are numerous examples of querns in Spilsby Sandstone from the unpublished excavations at Winterton Roman villa directed by Roger Goodburn, and also note a fragment from a Roman site at Brough on Humber (Gaunt *et al.* 1992). Gwilt came to the view that a number of the querns of Roman date from Shiptonthorpe, on the road from Brough on Humber to York, were potentially of Spilsby Sandstone and from Lincolnshire (2006, 216); if this is so this is particularly significant as the site has little by way of Iron Age evidence or occupation.

Late Iron Age and Roman examples of Spilsby Sandstone querns are known from a number of sites on the Wolds and Wolds margin and relatively near to Hatcliffe Top. From the excavations at Goltho Manor in the Clay Vale, which also revealed a settlement of early Roman date, lower and upper rotary quernstones in Spilsby Sandstone are attributed an early Roman date (Owen 1987, fig. 165, 197). Evaluation work at Ludford in 2012-3, over the known Roman site, produced a complete well-fashioned top stone with hopper, apparently in Spilsby Sandstone (Bradley *et al.* 2017). Another virtually complete top stone with hopper in Spilsby Sandstone was recovered at the Able Marine Energy Park site 4 (AMEP4), the site dating to the Late Iron Age and early Roman period (pers. comm. Chris Casswell and personal observation).

Table 7.4 Lithography and context of recovery of the quernstones from the Roman Roadside Settlement at Nettleton/Rothwell and the site at Hatcliffe Top (the latter including the stone mixing bowl)

Lithography:	Mount Pleasant, Nettleton/Rothwell (Late Iron Age to mid-Roman) Context of Recovery			Corner Field, Hatcliffe Top (Later Roman) Context of Recovery		
	Field Surface	Stratified	Field Edge	Field Surface	Stratified	Field Edge
Spilsby Sandstone	6	3	4	0	5	0
Millstone Grit / NRS	2	2	0	0	6	0
Igneous types	0	1	0	0	3	1
Lincolnshire Limestone	0	0	0	0	1	0
Totals	8	6	4	0	15	1

As mentioned this stone is prominent amongst the assemblage from the Mount Pleasant site (Shaffrey 2013), and it is also known at other sites examined as part of this Project, such as Brookenby. A plot of the geographic incidence of these querns, and others, is presented below (Section 11.9; Fig. 11.9).

Although post-Roman exploitation of this stone for milling is fairly widely attested, of the 240 fragments from querns at Anglo-Saxon Flixborough only one was of Spilsby Sandstone. That assemblage is dominated by fragments of Rhenish lava querns with the explanation that the status of the site enabled their preferential importation (Wastling 2009c). Post-Roman examples are known from sites such as Flaxengate, Lincoln (Mann 1982, 21-2).

Quernstones of Millstone Grit type sandstone occur in the area of the Wolds. One was recovered from surface collection at the Brookenby Roman site during work there as part of this Project (Willis forthcoming b). A fragment of Millstone Grit probably from a quern came from a ditch fill context of mid-Roman date at Trench J, Nettleton/Rothwell (Willis 2013).

Considering the Mountsorrel/Charnwood quern Ingle notes that two rotary querns believed to have been recovered from Hunsbury hillfort were fashioned from granite and are comparable in hand specimen to rock from the Mountsorrel (Charnwood Forest) Granodiorite, Leicestershire, which would be the nearest possible source in the case of these querns at Hunsbury (Ingle 1994, 31). She noted that examples of this lithography are infrequent in eastern England but reported an unprovenanced upper stone in Leicester Museum and another from Northampton (Ingle 1994, 31). Three saddle querns recovered during Wachter's excavations at the Breedon Hill Iron Age hillfort, Leicestershire, in 1957, were examples of Charnwood Forest igneous rocks (King and Wachter 1964). Another saddle quern of Charnwood Forest volcanic agglomerate was recovered at the Iron Age settlement at Elms Farm, Leicestershire, where again the possibilities of an erratic source or a traded item are entertained (Roe 2000). The recent publication of two excavated sites on the outskirts of Leicester documents other saddle querns of Mountsorrel Granodiorite and Charnwood Agglomerate, with some at least likely to have derived from the glacial till (Thomas and Roe 2011). The example from Hatcliffe Top had probably travelled further than any other quern recorded at the site.

Three querns, specifically B1, B2 and X1, occur in igneous rocks likely to be erratics derived from the glacial till and/or moraine in the vicinity of the site. Other examples of the use of igneous erratics to

fashion rotary querns are known from the eastern coast of Britain where much material of this type was deposited, having been transported from Scotland, Scandinavia and north-east England through glacial episodes. The upper stone from a beehive quern, in a granitic igneous rock, was recovered at the Iron Age and Roman period site at Catcote, Hartlepool, with a few others known from north-east Yorkshire (Long 1988, 32-3, fig. 8 no. 3; Hayes *et al.* 1980, 308).

Turning to the quernstone in Lincolnshire Limestone there are, again, precedents for querns fashioned from this stone type. Loughlin and Miller note the upper stone from a beehive type quern (presumably of Iron Age or early Roman date) fashioned from "coarse" limestone (Loughlin and Miller 1979, 165) found in a garden in Cleethorpes to the north-east of Hatcliffe Top. Further afield, a complete upper stone from a rotary quern fashioned from the Lincolnshire Limestone is noted at Elms Farm, Leicestershire, some 32km or more from the source; this came from an Iron Age context (Roe 2000). Roe documents some other examples of limestone querns found in Leicestershire (Roe 2000). With regard to East Yorkshire, Gwilt noted the presence of limestone querns including oolitic varieties amongst material he examined from Wetwang Slack, Garton Slack and Rudston, noting two examples probably of local limestone reported by Johnson from the early Roman fort site at Hayton (Gwilt 2006, 218; Johnson 1978).

Comparing this assemblage with finds from sites in the region is still hindered by the lack of fully published quern assemblages, though the picture is improved from the one Gwilt encountered (Gwilt 2006). Some eighteen quernstones are reported from the site at Old Winteringham by Stead arising from his fieldwork, ten of which were Mayen lava querns and predominantly of third and fourth century association. Only four querns were apparently recovered from his campaigns at Winterton villa, despite the scale of those excavations (Stead 1976, 229). Conceivably in the case of Winterton milling was mainly occurring away from the main building complex examined by Stead. A report on the eight quernstones from the mainly Late Roman site at Glebe Farm, Barton-upon Humber, was produced by Jon Watt but remains unpublished (Watt no date); this assemblage comprised a saddle quern, perhaps in use in the early Roman period, one Mayen lava quern fragment thought to be Roman and six examples of Millstone Grit type sandstone, all worn. In the case of the Roadside Settlement at Hibaldstow Smith mentions that "millstones found both inside and outside the buildings ... are evidence for household milling" (Smith 1987, 64), but full details have never been

published. The excavations at the Roadside Settlement at Sapperton in the south of the historic county have never been written up for publication either, though there are a series of interim reports; however, amongst these there is no mention of quernstones.

To the north-east of Hatcliffe Top recent developer funded work has revealed some evidence for quernstones. It is unclear from the reports on the fieldwork at Hobson Way, Stallingborough, whether two or seven quernstones were represented amongst the finds from the extensive excavations at this mainly Late Roman site (Field and McDaid 2011, 21; Vince and Field 2011). One was fashioned from granite (probably from an erratic) and recovered from a later Roman context, while another (or others) was lava stone of Mayen type from the Rhineland (Vince and Field 2011); again a fragment was recovered from a later Roman context.

Concluding observations

The fifteen quernstones recovered in the course of the fieldwork represent a useful collection given the fact that few quern reports are available for Lincolnshire and, by comparison, this is a sizable group. No saddle or beehive querns were present. Given the association of the former with a prehistoric date or specialist function, that is not surprising given the date of the activities at Hatcliffe Top. Likewise beehive querns are associated with the mid-Late Iron Age and earlier Roman era. No examples of lava querns were present either and indeed no examples of querns in this stone have been encountered in the twenty years of this Project in the Wolds area. Gwilt (2006), noting their rare occurrence at the Roadside Settlement at Shiptonthorpe, suggested that this may be due to their being of earlier Roman date and deduced their association was mainly with the military, and not normally part of rural indigenous distribution systems. One or two examples are known from sites in the North-East Lincolnshire area (cf. above) but otherwise they are numerous at few sites, such as Old Winteringham where the military association with this presumed port at the end of Ermine Street may be the explanation for their frequency. No apparent powered millstones are represented amongst the assemblage from Hatcliffe Top.

All but one of the quernstones came from stratified deposits at Hatcliffe Top associated with a later Roman date and all appear to be from flat or low rotary querns for hand oscillation. Given considerations of possible longevity in use, of residuality and the lack of precision in separating the late phases at Hatcliffe Top, as they just about all bunch up in the late third to fourth century, these quernstones are best understood

as one group associated with later Roman occupation rather than attempt to push trends from the stratified instances. In three instances where the diameter of the querns is apparent, these are large querns (460-500mm in diameter) consistent with the scale of Late Roman types. The bun-form quern C4 in Spilsby Sandstone seems small at first observation but it is incomplete having lost its lower portion, so the extant diameter is a minimum; it has a hopper and the impression is that it is unlikely to have been especially broad; it may be compared with Quern 18 from the Nettleton/Rothwell site (Shaffrey 2013). Quern X1 is fashioned from an erratic boulder so choice in size will have been limited by stone sizes available and stones approaching c. 500mm in diameter are unlikely in this region amongst the till deposits.

Generally the sources represented are well-attested in the wider region. Sub-regionally, however, data are sparse as few assemblages are listed and recorded from eastern and north-eastern Lincolnshire. The presence of Spilsby Sandstone examples is not surprising; the question remains whether these are residual in the contexts they were recovered from; the mounting evidence suggests this may not be so and that production continued into the later Roman period. Coarse grained sandstone querns resembling Millstone Grit lithography are also comparatively well-represented numerically but the majority are fragments from one context (at Trench D) which raises questions regarding this presence as representative for the site more generally. A single example of a Mountsorrel/Charnwood igneous quern is an interesting occurrence given the distance it has travelled; this source is occasionally present amongst assemblages of Iron Age and Roman date in Leicestershire and Northamptonshire but Hatcliffe Top must be one of the most distant outliers of the distribution. The likely lower stone of Lincolnshire Limestone is again a noteworthy find as this stone type accounts for only a very small proportion of querns of Roman date from the region. No other examples are known from work on the sites studied as part of the present Project, though a beehive example is known from Cleethorpes (cf. above), even further from the source than Hatcliffe Top. Finally, the three examples of querns in Basalt/similar fine-grained igneous rock find parallel in the presence of other examples fashioned evidently from hard glacial erratics in this area, either side of the mouth of the Humber where much suitable material was deposited in the drift till and moraines (cf. Shaffrey 2013, 292-3). This is an enduring rock but will have been a challenge to fashion into rotary querns, suggesting specialist manufacture, and either 'local preference' (embedded tradition?) or a need, financially or in terms of shortfall in availability, to

turn to this near intractable rock type. Compared with the similarly modest sized sample of querns from the Nettleton/Rothwell site (Shaffrey 2013) the sources are closely similar (Table 7.4). The Nettleton/Rothwell site has proportionally more Spilsby Sandstone querns which is likely to be a function of its date range, which includes the Iron Age, and its proximity to the likely source of manufacture of those querns. It too had coarse sandstone querns of the Millstone Grit type, plus one Basalt quern, likely to have been fashioned from an erratic, recovered from the fill of a Roman era ditch.

The incorporation of quernstone fragments within three oven/flue structures may have a practical/functional explanation. The use, however, of only fragments from querns - six separate querns - in the case of the threshold from stoke-pit to flue [4062]/[4058] in particular is potentially a case of symbolic selection, combining one process of transformation (milling) with another (preservation, processing or malting of grain). There may have been a ritualistic or religious aspect involved.

Quernstone manufacture from granite and basalt type rocks is attested in the Iron Age and Roman periods in some parts of Britain. Again, it is worth reflecting on some aspects of these types given that igneous rock was also a popular temper type selected for pottery manufacture in prehistoric Britain and may have been intentionally selected by ancient potters because of the distinctive landforms it gives rise to (Harrad 2003). Crushed Charnwood Forest volcanic rock was used as a pottery temper in the Anglo-Saxon period with a wide distribution of examples (Vince 1993, 4; Leahy 2007b, 51). It is known at Riby and elsewhere in north Lincolnshire up until the early eighth century, with speculation as to whether this is mapping a trade in finished pots or if the temper was being traded or otherwise moving, though on balance probably it was the pots (Vince 1993, 4; Leahy 2007b, 51). A cultural preference may be seen in this selection of volcanic rock for various uses and specifically here in the fashioning of Charnwood Forest granite in this quern example from Hatcliffe Top. There may have been continuous productive industries based in and around Charnwood Forest and the broad spread of items suggests continuities in trade and distribution routes from the Roman period (Vince 1993, 4) if not before. A further case of the use of igneous rock comes from the AMEP 2 site, Killingholme. Here, a substantive part of a quern fashioned from Gneiss was recovered from an Iron Age ditch terminal, and is thought by the reporters to be an import rather than fashioned from an erratic (pers. comm. Chris Casswell) although gneiss is known from Boulder Clay in the area.

In general the assemblage from Hatcliffe Top indicates substantive milling activity at the site for domestic/local flour consumption. It testifies to the integration of the site with exchange systems involving quern supply and distribution, in some ways reflecting a wider East Midlands/Lincolnshire pattern but with a local signature too. Given such a small proportion of the site was investigated by excavation the actual quern assemblage at this site must have been large.

7.11 Hones and Polishing/Pounding Stones

Eight stones employed as hones or likely to have been used as hones were recovered, all from Corner Field. No certain whetstones (stones shaped for the purpose of sharpening, polishing or rubbing) were recovered. One stone may have been used as a pounder or for rubbing (Stone 9). Of the hones two came from field ploughsoil (Hones 7 and 8), one came from ploughsoil within Trench B (Hone 2) and one came from a medieval furrow fill (6); the remaining four were stratified in Roman period contexts.

Hones

Hone 1. Trench A, Context (1031), fill of Ditch [1068]. RF 15

A broken fragment probably originally of sub-rectangular block form. This is a fine grained sandstone, with some mica and an even grain size; no bedding is visible; grey with a reddish tinge. This resembles to a degree the silty sandstone from the Mercia Mudstone formation from the Isle of Axeholme area which is normally grey-green but can be red; the fine grain size makes this stone highly suitable for use in sharpening metal tools (pers. comm. Paul Hildreth). Similar to Hones 2 and 8; possibly an erratic. Parts of three of the original surfaces are represented; one is flattish but

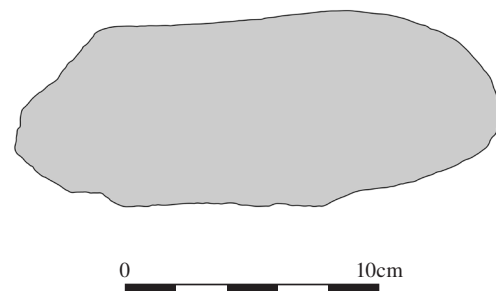


Fig. 7.25 Profile of Hone 5

has not been used. Only a small area of one of the remaining two of these original sides is represented and that seems to have been used. A larger area of the third original side survives and is very smooth, almost ultra-smooth, evidently having been used. The stone has been burnt, possibly resulting in the fragmentation.

Length 60mm; width 60mm; height/thickness: 54mm; weight: 250g

Hone 2. Trench B, Context (2026), ploughsoil at the western end of trench. RF 2070

Possible hone. Somewhat irregular grey sub-rectangular fragment of very fine sandstone of even grain size showing fine bedding. There is reddish colouration on what is likely to be an erratic. This item has one fairly flat broad original surface which is smooth, possibly through use; the opposite side is irregular having sheered partly along its bedding. Two opposite side edges are fairly smooth but have not been used, while the ends are broken. Similar stone type to Hones 1 and 8.

Length 71mm; width 51mm; height/thickness: 31mm; weight: 149g

Hone 3. Trench C, Context (3024), fill of Pit [3025]. RF 3515

Dark cobble fragment of hard dense basaltic-doleritic rock, broken at one end. Probably from a glacial erratic with one side showing glacial/water-worn type abrasion and rounding. This wedged-shaped fragment has one flat very smooth surface, another partly semi-smooth, a worn cobble-original surface, and a post-usage break. Both of the smooth surfaces are likely to have been used for polishing. Given its form it is quite possible this item has been repurposed from a broken quernstone fragment.

Length 121mm; width 71mm; height/thickness: 53mm; weight: 521g

Hone 4. Trench C, Context (3041), fill of Flue [3050]. RF 3516

Small dark grey fragmentary block of hard basaltic rock, from a larger item. Two flattish surfaces (top and bottom) with two irregular edges (breaks), an irregular (hackly) original edge and a smoother original edge. The two flat surfaces are smooth, with one somewhat smoother than the other, perhaps due to polishing, with the smoother edge also the result, potentially, of human use.

Length 61mm; width 54mm; height/thickness: 39mm; weight: 248g

Hone 5. Trench C, Context (3552), structure of Oven. RF 3508

Large stone used for sharpening, polishing and (perhaps) pounding. This item occurs in a standard example of New Red Sandstone with even, medium-sized grains, homogeneous, and with some mica present, and probably silica cemented. New Red Sandstone of this type is likely to be from the Sherwood Sandstone or from North East England (Co. Durham/Tees Valley) and perhaps therefore an erratic (pers. comm. Paul Hildreth). The stone survives as block shaped, with original topside, part of the bottom side and one edge; the other three edges are broken, as is part of the face of the underside. What is here taken as the top surface is ultra-smooth and slightly dished over its main area with a higher area to one side, by the edge, also ultra-smooth. The extant edge is rounded and also ultra-smooth. The extant underside is somewhat irregular but is smooth; however, this side may not have been used. This stone was probably used as a larger rubber/sharpening stone, for object surfaces and broader area as well as edges. This stone was evidently employed at various angles. It will have been placed on the ground or on another stable flat surface with the items to be worked brought to it for use of its flattened honing surface, and it may have been set on-edge for sharpening tools and blades, these items being drawn across its edge-surface at an angle, hence the rounded edge. The dished flat surface may be the result of rubbing or pounding substances, including foodstuffs. This stone was recovered in close association with the quartzite pebble Stone 9, RF 3509, which may have been a pounder or rubber used in conjunction with this stone. The form of this block suggests it is not a re-purposed quern.

Length (broken) 187mm; width (broken) 125mm; height/thickness: 71mm; weight: 2233g. (Fig. 7.25)

Hone 6. Trench C, Context (3778), fill of Furrow [3720]. RF 3514

Small greenish-grey rectangular slab of hard very fine grained sandstone/siltstone with some fine mica, probably broken from a larger item. This may be from the Mercia Mudstone formation, as exposed at the Isle of Axeholme (pers. comm. Paul Hildreth). One flat very smooth surface, slightly concave, is likely to have been used for polishing; the opposite side is irregular where the original surface has split away. The sides are straight, flat and regular but have not been smoothed; the ends are both broken.

Length 46mm; width 32mm; height/thickness: 9mm; weight: 27g



Fig. 7.26 Hone 7.

Hone 7. Context (1000), ploughsoil, Corner Field, 2007. RF 14

A complete grey cobble-sized elongated 'water-worn' stone, very smooth, somewhat broader and thicker at one end. This is dense, hard and very fine grained, likely to be igneous, rock, possibly Basalt, homogenous in appearance with no defects (pers. comm. Paul Hildreth). A deep medial groove runs the length of the cobble on one face. The groove is too deep and precise to be natural, so must have been created (pers. comm. Paul Hildreth). The groove has presumably been

fashioned and exaggerated by the drawing through of edged tools and/or blades to ensure sharpness; sand could have been put into the groove to assist this process. Both ends have some impact damage, especially the boarder end indicating the stone has been employed at some time for hammering. The cobble fits comfortably in the hand. Irregular surface scraps either side of the groove look likely to be damage from a single modern plough impact.

Length 179mm; width 66mm; height/thickness: 34mm; weight: 756g. (Fig. 7.26)



Fig. 7.27 Hone 8.

Hone 8. Context (2000), ploughsoil, Corner Field, 2014. RF 2069

Fairly large sub-rectangular grey cobble fragment of very fine sandstone of even grain size showing fine bedding. There is some reddish colouration on what is likely to be an erratic; similar in appearance to Hones 1 and 2. This near-square item has one fairly flat broad original surface. The opposite original surface has been lost as the stone has broken approximately across a bedding plain where it is slightly irregular. It is possible the use of this stone post-dates this break. The four angular corners are rounded at the angle. But for its size and shape this might be thought to be a whetstone. Neither flat broad surface has been used but three of the sides have been, with the two ends being completely flat, one ultra-smooth, the other smooth.

Length 85mm; width 83mm; height/thickness: 28mm; weight: 469g. (Fig. 7.27)

Pounder/Rubbing stone

Stone 9. Trench C, Context (3552), structure of Oven. RF 3509

Rounded off-white to ochre coloured quartzite pebble. This item is likely to be an erratic, potentially from North East England (pers. comm. Paul Hildreth). This stone is potato shaped but with one side flat and extremely smooth, presumably the result of use-wear; it fits well in the hand for application of this surface. Probably employed as a pounder or rubbing stone. Recovered from the same context as Hone 5 with which it may have been utilized.

Length 93mm; width 64mm; height 50mm; weight: 459g. Not illustrated.

7.12 Lead

A modest assemblage of lead items was recovered as a result of the fieldwork in Corner Field. Lead items were recovered at all six trenches with stratified examples coming from Trenches, A, C, D and E. The date of the lead from the ploughsoil at these locations remains uncertain. The majority of the pieces were very small and constitute (or are likely to be) melt/run, scrap, strips and sheet for working. Most of the pieces of lead recovered through the fieldwork were discovered by use of a metal detector. That is to be expected given the small size, colour and shape of much of the material found during these excavations which work against its recognition by eye. Indeed, this reflects the general pattern of recovery of lead during archaeological work at Roman and later sites. Some items were recovered by excavators, as with L122 and L123.

Lead was a comparatively expensive commodity in the past and valued for its wide potential uses, malleability and flexibility, in plumbing, sealing, joining and plugging, as well as for creating tanks, for lining some elite tombs, in moulding weights and measures and in decoration. It was also used for joining and in alloying. In the later Roman period it was used in the manufacture of pewter ware and in the Medieval era was employed to create lead vessels. It is, of course, a widespread find on sites of the Roman period.

Considering the occurrence of lead by area investigated, at Trench A, the most notable piece was part of a small ingot or bar from the Late Roman ditch fill (1047). This context contained a comparatively wide range of finds dating to that period. Six pieces of lead came from Trench B but all from topsoil/ploughsoil deposits, three evidently being solidified droplets. However, B also produced an ingot/bar. Trench C only produced two examples, despite the number of features examined; these included the galena fragment (see below). Only two further pieces came from Trench D, including a fragment of lead for re-working from the Late Roman layer (4002). Also forthcoming was a small thimble shaped weight, from the trench ploughsoil, comparable in size, weight and form to another from the ploughsoil within the field (see below). Whilst Trench E was smaller than Trenches C and D it produced as many pieces of lead as both those trenches, three of which were stratified. None of the pieces from E, was, however, particularly informative. Trench F produced a fragment of lead strip, again from the trench ploughsoil. It is likely that lead is quite frequent across the field, particularly in the ploughsoil (items L117 and L118 being fairly representative). The undiagnostic nature of the droplets, run, strips and sheet etc. might be examined by XRF analysis of the core metal. Had the lead items found by metal detecting across the field been fully retained upon discovery and systematically located it



Fig. 7.28 The 'ingot' of lead ore (galena) from the Late Roman Phase 4 ditch at Trench C.

would have been possible to compare the distribution of the lead with that of the Roman coins to establish the degree of correspondence. A correspondence might indicate something of the proportion of lead in the ploughsoil likely to be derived from the Roman site. Lead may well have been brought to the site in the Anglo-Saxon period and the find from (1014) in Trench A comes from a feature potentially of that date. Since pottery of this era was found predominately in later ploughed deposits any lead from that occupation is likely to have been similarly incorporated.

The ingot of lead ore (galena) from the Late Roman Phase 4 ditch at C is a surprising find as when encountered lead ingots normally comprise smelted and refined metal (Fig. 7.28). Item L123 displays irregular pseudo-crystalline fractures and veins of quartz/quartzite. Its identification as galena (lead sulphide) was confirmed by the Physical Sciences Department, University of Kent, through SEM examination. The find is hard to parallel on an archaeological site. The explanation may lie in its date. Perhaps by the end of the Roman era lead was still being extracted from Derbyshire sources but the infrastructure for processing was limited or no longer in place, and the commodity was nonetheless

marketed in its raw state, or some proportion was thus distributed.

The thimble shaped item from the field ploughsoil, L111, as with L109 from Trench D ploughsoil, is likely to be a small weight. A larger thimble shaped weight from ploughsoil at Brookenby, recovered in 2018 during work on the Central Wolds Project, is of similar form but larger and heavier at 111.7g, while another smaller weight, of drum shape with flattened-down flash from the same location weighs 23.4g. Two further measurement weights somewhat similar in form to L111 are reported from Flixborough, one being sub-pyramid and the other of drum form, though the weights are different (Wastling 2009d, 424, fig. 13.3 nos 3283 and 3284). L109 and L111 could be Roman or Anglo Saxon, or of later date as their characteristics are not date-specific.

The lead window came fragment, recovered from the ploughsoil, cannot be closely dated and in any case is quiet likely to have been brought to the field as scrap for reworking or via manuring. Lead comes to hold window glass are known from the Roman period and were in use in the early medieval era, becoming more common after the 8th century. This item could be later in date.

Table 7.5 Lead items from the excavated Trenches

Item code	Context & Trench Phase	Description	Dimensions (mm)	Weight (g)
Trench A				
L119	Ploughsoil (1001)	Section of flat sheet with essentially smooth top and bottom surfaces; edges irregular; thicker at one end and here it has been cut through; fairly corroded	Length: 29 Width: 20 Height: 4	9.3
L120	Ploughsoil (1001)	Highly irregular melted 'run'	L: 25 W: 10, H: 7	7.1
L121	Gully fill (1014) Phase 2 or 3	Amorphous irregular 'run' of melt	L: 26 W: 19, H: 7	11.2
L122	Ditch fill (1047) Phase 2	Part of an ingot or bar with a fairly regular upper surface, side and base. Angular straight cuts occur on three sides where parts have evidently been removed for separate use. Dense feel	L: 32 W: 18 H: 9	25.5
Trench B				
L115	Ploughsoil, east end of Trench (2001)	An ingot or bar. Originally of regular rectangular form with a square end, straight smooth sides, flat upper surface where the molten lead has settled with a slight splay above the mould, and a probable flat base. Now distorted at the end opposite the square end where it has perhaps been heated and certainly bent in prising off a section of the ingot leaving an irregular broken end. There are one or two 'nicks' and dents in the base and sides. Dense feel. Different ingot from that represented at Trench A (L122)	L: 53 W: 25 H: 13	92
L116	Ploughsoil, east end of Trench (2001)	Flattened amorphous piece with irregular surfaces	L: 15 W: 11, H: 2	2.5
L125	Ploughsoil, east end of Trench (2001)	Fragment of cut sheet, irregular form	L: 16 W: 8, H: 3	1.5

Table 7.5 Lead items from the excavated Trenches (continued)

Item code	Context & Trench Phase	Description	Dimensions (mm)	Weight (g)
L113	Ploughsoil, west end of Trench (2026)	Irregular item, broadly lozenge shaped in outline and flattish. The (presumed) upper surface is uneven but comparatively flat while other surfaces are highly irregular. This seems to be a droplet that has solidified on an uneven irregular surface. Characteristically similar to L114	L: 19 W: 14 H: 5	5.6
L114	Ploughsoil, west end of Trench (2026)	Irregular item, broadly oval in shape and flattish. The (presumed) upper surface is flat but other surfaces are highly irregular. This seems to be a droplet that has solidified on an uneven surface (cf. L113)	L: 18.5 W: 11 H: 6	5.5
L126	Ploughsoil, west end of trench (2026)	Highly irregular item, with form suggesting a thin splayed droplet that has solidified on an uneven surface	L: 19 W: 9 H: 5	2.4
Trench B/C				
L112	From general spoil heap for Trenches B and C in 2008 (2035)	A regular straight strip with a flat base and top, with proportionate bevelled sides so that the item tapers in section from 9 to 6mm. Irregular breaks at both ends. This would appear to be a finishing strip or trim	L: 37 W: 9 H: 4	7.3
Trench C				
L107	Path surfacing (3502) Phase 2	Irregular flat item; possibly run with a cutting mark at one end	L: 17 W: 10, H: 1	1.6
L123	Ditch fill (3707) Phase 4	'Ingot' of irregular bar shape. It has a rough flat upper surface and a somewhat undulating lower surface, with sides slightly irregular displaying some crystalline platy character reminiscent of galena. This bar seems to have been split off from a larger thick sheet of raw lead ore. A thin band of quartz is visible in section near the top side of the piece (up to 1.5mm thick). Dense feel. Fig. 7.28	L: 69 W: 31 H: 31	255
L108	Ploughsoil outside trench (3715)	From field surface close-by Trench C. Flat item, seemingly cut or punched through as one end has two regular incomplete right-angled perforations 13 x 3mm and 6 x 2. The item is broken at this end and so the original dimensions of the cut are uncertain	L: 26 W: 20 H: 1	3.2
Trench D				
L109	Ploughsoil (4000)	Probable weight. A regular conical thimble shaped item, with a central perforation. The perforation narrows to the top consistent with the tapering of the outer circumference, from a diameter of 8 to 4mm. There is no internal threading. If not a weight for a net etc. then possibly a junction cover where a tang enters a handle	Diameter at base: 15 D at top: 11 H: 13	11.9
L110	Layer (4002) Phase 3	A largely square item with a small bead at one end. Appears to have been a flatter long item folded over and compressed. Scrap?	L: 19.5 W: 15 H: 5	3.9
Trench E				
L101	Topsoil (5000)	Irregular strip, flat on one side; irregular angles.	L: 23 W: 15, H: 6	5.7
L102	Ditch fill (5011) Phase 1B	Bead shaped with irregular tail: droplet and run?	L: 13 W: 8.5, H: 4	2.8
L103	Ditch fill (5011) Phase 1B	Fairly flat with irregular surfaces; bean shaped: flattened droplet?	L: 14 W: 8, H: 3.5	2.0
L104	Ditch fill (5011) Phase 1B	Very small, irregular, angular item	L: 10 W: 6, H: 2.5	0.5
L105	Unstratified	Fairly flat item with irregular surfaces; flattened droplet?	L: 17 W: 14, H: 6	3.9
Trench F				
L106	Ploughsoil (6000)	A regular slightly tapering strip with a d-section. Irregular breaks at both ends	L: 19 W: 8.5, H: 4	3.0

Table 7.6 Selected lead items recovered by metal-detecting of the ploughsoil in Corner Field

Item number	Context & Year	Description	Dimensions (mm)	Weight (g)
L117	Ploughsoil 2007	A basically flat spread of melted 'run' with irregular upper and lower surfaces; cut across at one end leaving a straight edge (now weathered)	L: 20 W: 16 H: 4	5.6
L118	Ploughsoil 2007	Flat, somewhat corroded, piece of sheet lead with cut edges and a snick cut into the extant sheet	L: 21 W: 12 H: 2	3.2
L111	Ploughsoil 2010	Cast measurement weight. Small thimble shaped item of distinct regular form with omphalos base. A scrape across the base at one edge has pushed outward a small protuberance, whilst the dome top slopes marginally on one side which may represent trimming.	D at base: 12 D at top: 7.5 H: 12	9.9
L124	Ploughsoil 2010	A strip of lead came with H-section to hold thin window glass. The form is well-preserved despite the item having been twisted along its length virtually 360° probably through the breaking of a longer length to create a convenient piece for potential reuse.	L: 27 W: 5 Depth: 4.5 W of recesses c. 2-2.5	3.8

7.13 Glass

Rose Broadley

7.13.1 Catalogue of Glass fragments from Hatcliffe Top

Roman vessel glass

Trench A

Item G1. Context (1031), fill in Ditch [1068]. Trench Phase 2

Fragment of olive-green glass. There is a slight curvature to this piece which is a 'mid-vessel' body sherd. A series of horizontal striations present may represent a band of incised linear decoration. This piece is typical of Late Roman (fourth century AD) vessel glass. L: 26.6mm, W: 9.5, Th: 2.6; weight: 1.1g

Item G2. Context (1054), layer. Trench Phase 1A
A thick fragment of blue-green glass. This fragment shows advanced lamination which obscures some details. It is of unusual shape, and there is streaking in the metal body of the glass. It was probably not a high quality product and may have suffered heat damage or be waste glass from processing. The colour is most typical of early to mid-Roman (first to third century AD) glass. L: 39, W: 22, Th: 5; weight: 6.8g

Item G3. Context (1061), a fill of Ditch [1062]. Trench Phase 2
Fragment of very thin colourless glass, curved but

otherwise featureless. Likely to represent good quality dining ware, probably a cup, with the sherd probably from the edge of the base. Early to mid-Roman. L: 18, W: 16, Th: 1; weight: 0.8g

Trench B

Item G4. Context (2002), surface cleaning over features [2007], [2009], etc. probably from Phase 3.
This thin fragment of olive-green glass showing a curve is probably from a vessel. The glass is quite good quality with many tiny bubbles present. This item neither looks to be Medieval or post-Medieval potash glass or modern and a Late Roman date is most likely. L: 18, W: 15, Th: 1; weight: 0.8g

Roman window glass

Trench C

Item G5. Context (3039), fill of probable post hole cut [3040]. Unphased
Very small blue-green fragment with no original edges surviving. Has both a matt surface and a glossy one, indicating manufacture via the 'casting' method. This type of window glass is associated with the later first to third century AD. L: 16.4, W: 10.4, Th: 5.1; weight: 0.7g

Medieval or Post-Medieval glass

Trench C

Item G6. Context (3001), ploughsoil within Trench C
Small fragment of nearly colourless glass, from a vessel, heavily laminating and showing no diagnostic features.

This item is typical of potash glass of the Medieval or post-Medieval period. L: 18, W: 15, Th: 2.5; weight: 1.1g

Post-Medieval glass

Item G7. Context (2001), ploughsoil within Trench B
Small fragment of olive-green glass. From a post-Medieval bottle, probably 18th or early 19th century. Weight: 3.8g

Items G8. Unstratified, Trench C
Two small fragments of quite thick colourless glass, possibly from the same vessel. One possibly clipped fragment shows a series of percussive actions along one edge, although this may be the result of post-depositional processes. The appearance of this glass suggests it is probably from a post-Medieval vessel. Weight: 1.8g

Item G9. Context (3001), ploughsoil within Trench C
Very small fragment of blue glass with no features. Probably 19th century. Weight: 0.5g

Item G10. Context (3001), ploughsoil within Trench C
Very small fragment of colourless glass with no features. Probably 19th century. Weight: 1g

Item G11. Context (3001), ploughsoil within Trench C
Very small fragment of colourless glass with no features. Probably 19th century. Weight: 1g

Item G12. Context (3700), ploughsoil within Trench C, western end
A very thick pale green fragment. A groove line existing as a trace indicates this fragment is from a mould-blown post-Medieval bottle. Weight: 10.5g

Item G13. Context (4000) ploughsoil within Trench D
Very small olive-green fragment with thin wall. Abraded. From a post-Medieval bottle. Weight: 0.6g

Item G14. Context (9000), ploughsoil, Corner Field
This piece is the greater part of the plug of a bottle stopper of pale green glass which has snapped off. This long-lived type spans the late 18th to the early 20th century. Weight: 5.7g

Item G15. Context (9000), ploughsoil, Corner Field
Fragment of thin clear window glass. Clipped, with a shaped edge. Probably post-Medieval. L: 22, W: 12, Th: 1.5; weight: 1.1g

7.13.2 Discussion

Sixteen fragments of glass were found during the fieldwork at Hatcliffe Top, of which five are Roman, ten post-Medieval, and one Medieval or post-Medieval. The Roman fragments comprise four vessel glass sherds and one small fragment of window glass, and all are from stratified Roman features. Of the Roman vessel glass sherds, a fine colourless sherd (G3) is the earliest in date and probably comes from a good quality cup of the second century AD. It is likely to be residual in its context, which was a later Roman fill of a trackside boundary ditch in the centre of the site, where it was found alongside some good quality pottery of a similar date (i.e. likewise residual). Also probably of a mid-Roman date and probably residual is an unusually-shaped and thick blue-green fragment (G2), which was found in a Late Roman gully at the heart of the site. In contrast to G3, it was not a high quality product and may have suffered heat damage or even be waste glass from processing. The remaining two Roman vessel glass sherds are both olive-green, with one in particular having a typical Late Roman appearance and traces of horizontal linear incised decoration (G1). G1 is from another Late Roman trackside ditch, and G4 from another Late Roman gully, both located in the centre of the site. All four form a slight background scatter resulting from the use of glass vessels in the central area of the site from approximately the second to fourth centuries AD.

The single small fragment of blue-green ‘matt-glossy’ Roman window glass (G5) suggests the possibility of a glazed building nearby in the second or third centuries AD, although the fragment was found on its own in the fill of a post hole (feature [3040]), which has been interpreted as Late Roman. Alternatively the fragment may have been brought to the site for reworking.

The remaining ten Medieval to post-Medieval glass items (G6-G15) are largely from modern ploughsoil contexts. Three are from post-Medieval bottles (G7, G12 and G13), one from a window (G15), and one from the plug of a bottle stopper (G14). One fragment is only identifiable as Medieval or post-Medieval potash glass (G6) and another only as colourless glass likely to be from a post-Medieval vessel (G8). The final three post-Medieval fragments are too small to identify as either vessel or window glass, although a late post-Medieval date is suggested by the nature of the glass.

7.14 The Coins

7.14.1 Introduction

Steven Willis

During the fieldwork undertaken between 2007 and 2016 a total of 165 coins were recovered, all from Corner Field. No coins were recovered by the Society during their fieldwalking exercises and excavation in Corner Field in 2005. Mr Stephenson kindly made available the twenty coins he had gathered from the field surface by eye some 50 plus years previously (cf Section 3.2) to include in the study. No other coins are known from the site or reported by the Portable Antiquities Scheme (up to October 2018). Several of the coins from the 2007-2016 fieldwork were recovered by excavators from trench layers but by far the greater number were found via metal detecting of the field surface, when cropping and cultivation allowed. Stan Little found the majority, assisted by Des Pearce and Alan Daws. The overall collection of 185 coins from the site were cleaned and fully recorded by David Holman, being listed in Table 7.7; his report follows below.

During the excavations the trenches were periodically scanned by metal detector in advance of cleaning and feature excavation in order to identify the presence of metal items such as coins. Spoil from individual contexts was heaped separately in piles labelled with context numbers in preparation for scanning in case finds had been missed (Fig. 4.30). Very few coins were found by these means. In terms of field survey by metal detecting, the whole of the available area of Corner Field was systematically searched and the resultant plots (Figs 11.10–12) represent the outcome of several hundreds of hours of scanning and so can be taken as a reliable picture of the distribution of coin presence in the ploughsoil (and presumably of coin loss/deposition, with some provisos). The margin of land adjacent to the long Plantation on the south-west side of the field was normally unavailable as it was planted with maize related to the raising of game birds and so an absence of finds from this c. 25m wide strip is explained for that reason. Only a few hours were spent scanning the surfaces of Stable Field and Home Field+ but with no coin finds forthcoming and very low levels of material culture present in the ploughsoil the lack of recovered coins is likely to be representative. The Society did not include any metal detecting during their investigations of Corner Field in 2005.

7.14.2 Report on the Coins from Hatcliffe Top

David Holman

A total of 185 coins was catalogued from the site, consisting of one Iron Age, 168 Roman, five Saxon, and six post-Medieval, plus five modern fantasy copies. The majority of these were found in the ploughsoil by metal-detector users during the fieldwork seasons; other coins from the ploughsoil comprised the group collected by Mr Stephenson approximately 60 years ago forming the Stephenson collection. Only 24 coins were recovered from the excavated trenches, nine being from topsoil/ploughsoil, three from Medieval furrow fills and only twelve from stratified contexts. The trench totals were: A: 1, B: 4, C: 6, D: 10, E: 1, F: 2.

Iron Age

A solitary broken and illegible silver fragment, which has not been possible to identify to type, is the only coin which may be attributable to the late Iron Age. It may be an issue of the Corieltavi, the tribal grouping in whose heartland the site lies, and probably dates to the later first century BC. This single find suggests that Iron Age activity at Hatcliffe Top was very limited in nature, which is also supported by the very low number of early Roman coins, and it may be nothing more than a casual loss unrelated to any occupation. XRF analysis, for metal content, shows that from obverse and reverse surface readings the coin is likely to be composed almost entirely of a near equal mix of copper and silver with the proviso that these measurements are from the surface only.

Roman

Of the 168 Roman coins recovered, 152 are identifiable to one of the 21 periods used for the study of Roman coinage in Britain (Reece 1991). The condition of the coins is generally rather worn, a common feature of finds from ploughsoil, which are subject to environmental changes and farming activity, and the remaining 16 can only be allocated to broader periods owing to their condition. It is thus difficult to assess how much of the wear exhibited is the result of circulation and how much is due to post-depositional factors. It is noted that the state of preservation is, on the whole, better than that of the coins found at a similar nearby site at Mount Pleasant, near Nettleton (Willis 2013), perhaps partly the result of better soil conditions and partly because the chronological distribution, and consequently the precise metal composition, of the Hatcliffe Top coins is quite different.

Figure 7.29 shows the number of coins from each period expressed as a percentage of the (identified) site total and Figure 7.30 the Roman coins expressed in terms of annual loss per 1000 (cf. Reece 1991). These show a very heavy concentration from the mid-fourth century onwards but surprisingly little earlier activity. This is not untypical for a British site owing to the huge increase in circulating low-value coinage after around AD 260, but the low numbers of coins dated between AD 260 and AD 330 here is a more unusual feature. There are just 22 coins dating from before AD 330, of which 20 are identifiable to period, the earliest being a mid-first century copy of an *as* of Claudius I (Stephenson Collection). There are only two other coins earlier than the mid-third century (also Stephenson Collection, see below). The very worn condition of these three early coins suggests a long circulation life and a date of deposition in the third century need not be discounted. More surprising is the low number of radiate *antoniniani*, common on most British sites, but here represented by only fourteen coins, of which six are contemporary copies. A low number of radiates on a site may indicate ongoing restricted activity; upheaval for whatever reason in the surrounding area; or even abandonment, whether permanent or temporary, with occupation in a different form sometimes recommencing later. It may also be the case that the site had not yet properly developed. This feature has been noted on several sites in east Kent on which both earlier and later coins and supporting archaeology are present, for example, Minster Roman villa (Holman and Parfitt 2005). At Hatcliffe Top it suggests that activity, always very low through the early and/or mid-Roman era, continued in the same manner into the fourth century, an impression reinforced by the low number of coins dated between AD 296 and AD 330. Coins of this period are generally present on British sites but in much smaller numbers compared to what is seen both before and after, and this is the case at Hatcliffe Top, with the five coins here typical of British site finds.

After c. AD 330, however, the site saw a very significant increase in coin use and loss with large numbers of coins suddenly present. By itself this would not be unusual as most British sites exhibit high losses at this time, but here it suggests that the site only really became active in any meaningful fashion towards the mid-fourth century. The ratio of coins dated AD 260-296 to those dated after AD 330 is extremely low, only five sites listed by Reece (1991) being lower, and those include two west country temples and a rural settlement in Cornwall, none of which can be considered relevant. Of the 168 Roman coins recovered, 139 are dated to the period AD 330-402

(86% of the 161 coins which can be placed into one of Reece's four broad periods). This is an unusually high proportion, again only exceeded by the three western sites referred to above. However, attention is drawn below to certain caveats which must be borne in mind when comparing against the sites listed by Reece.

The coins dated AD 330-402 can be looked at in greater detail. As is commonly the case for British sites, those dated AD 330-348 (period 17) form the largest component with 65 coins, of which 18 are certainly copies. Copies dominate in period 18 (AD 348-364). In this period at least 22 – and probably more – of the 30 coins are 'Fallen Horseman' copies or cut-down fragments of official coins. This is again typical for Britain, where such copies were produced in vast quantities to counter the lack of officially provided coinage at, seemingly, a large number of unofficial 'minting' sites. That no period 18 coins were found in the 2014 season despite the same area being covered is a good example of the vagaries of chance discoveries and shows how easily site proportions can change depending on the sample; sustained episodic detecting, under variety of conditions, can it seems produce more reliable samples overall. The 20 coins dated AD 364-378 (period 19) again represent a typical British assemblage. Following an apparent gap in period 20 (AD 378-388), which, despite appearances, is of little significance given the general scarcity of coins of that date, coins of period 21 (AD 388-402) are represented by a further 17 pieces including one siliqua fragment. This is significant, as it demonstrates activity at Hatcliffe Top certainly into the 390s and potentially into the early years of the fifth century. In practice, few bronze coins later than AD 392-395 entered Britain and coins after AD 402 are effectively absent.

A comparison with the Lincolnshire Mean (Walton 2011, 79-80) shows that Hatcliffe has a later than average profile for the region, with a notably higher proportion of Theodosian coins, but can still be seen overall as not atypical for a Romano-British rural site. The most appropriate site with which to make a comparison is the Mount Pleasant, Nettleton and Rothwell site, also on the Wolds, some 9 kilometres to the south-west, which has also seen metal detecting activity and subsequent archaeological input, with many of the detected coins from that site also having been found by Stan Little (Willis 2013). Archaeological work at that site has produced three Iron Age and 104 Roman coins (90 identifiable to exact period, 99 to broad period) but those figures give no indication of the remarkable disparity between these two geographically closely related sites. Mount Pleasant again has few early (pre-AD 260) coins, but there the similarity ends as that site has produced a large number of *antoniniani*

(AD 260-296) in direct contrast to Hatcliffe Top. Conversely, in the years after AD 330, that is at just the time when coin loss at Hatcliffe Top shows a significant increase, there is a substantial decrease at Mount Pleasant, where coin loss effectively ceases by the mid-fourth century. As has already been noted (Holman 2013, 261), the polarisation of the distribution of late third/early fourth century coins compared to those of the mid-late fourth century between Mount Pleasant and Hatcliffe Top is so great that a link between these sites may perhaps be inferred, most probably as a result of settlement shift as an element of landscape reorganization.

No Roman coins which might be regarded as significant or unusual in a British context are present amongst this assemblage from Hatcliffe Top.

It is appropriate here to mention a potential problem with the statistics derived from Reece's 140 British sites (1991) which has become more evident in recent years. Few of those sites saw the use of metal detectors, indeed many were excavated before the advent of such machines in a non-military capacity. Having found many coins discarded on spoil heaps over the years by the careful use of a metal detector, mostly those of smaller size, the writer believes that much would have been missed on earlier excavations, however careful the excavators; the smaller the coin, the greater the likelihood of it being missed and the more distorted the statistics become. Consequently, those periods with a preponderance of smaller coins, in particular periods 14, 17 and 18, to which the copies mostly date, are likely to be under-represented in many site coin-lists, thus it must be accepted that there are caveats if you compare those figures with metal-detected sites. It is noted that a group of 20 coins from the field found by a ploughman in the 1960s included all three large, early Roman, coins which have come from this site. That these were found 'by-eye' is not so surprising given their size and colour yet he otherwise saw and collected small Late Roman coins too; the three early coins are worn and may have been in circulation a long while. These three coins apart there is nothing different about this group compared with the overall coin assemblage from the site once coin-condition is considered (see below).

Saxon

Five Saxon coins were recovered, all of which are sceattas ('early pennies'). These all date to the early 8th century and strongly suggest some form of activity at this time in the immediate area, Saxon coins generally being uncommon as site finds. One is of a type putatively attributed to a mint at York by Abramson (2006, 15) although Metcalf saw it as a possible

import from Quentovic (1993, 266-70). There is also a subsidiary imitation in poor silver related to this, perhaps produced somewhere in the East Midlands region (Metcalf 1993, 270). The other three coins are all of continental origin although widespread in England. In view of the latest Roman coins being present at Hatcliffe Top, it may be significant that some evidence of Saxon activity has come to light, not just coins but also pottery and other metalwork, quite unlike the Mount Pleasant site where the latest Roman coins are absent and there is no evidence of Saxon activity (Holman 2013).

Post-Medieval

No Medieval coins were recovered, suggesting very little activity here in the Medieval period. A penny of Elizabeth I and a halfpenny of William and Mary are both common finds but a quarter-guinea of George III is altogether more unexpected. This was of not inconsiderable value in the 1760s and was not something the average farm labourer would have probably owned, so how it came to be lost here remains a mystery, although accidental loss on a habitation site and subsequent waste dumping may be the most likely explanation. It is slightly bent on opposed edges but whether this is a result of plough damage or whether it was a deliberate act, for use as a 'love token', albeit an unusually high value one, is impossible to say. The other post-medieval coins are all late 20th century including, bizarrely, an issue of the Republic of Nigeria, evidently discarded as of no-value rubbish.

Modern

Three modern fantasy pieces simply mimicking Iron Age silver coins issued by the Corieltavi, but made from a primarily lead alloy, were recovered from the ploughsoil. There are also two sceatta imitations struck from the same dies, again made from a lead alloy. A number of modern lead forgeries, mostly of otherwise unknown types of sceatta, have been reported to the Portable Antiquities Scheme from the North East Lincolnshire area, notably a hoard from near Grimsby (DENO-24F462), with further finds at nearby Swinhope (NLM-6B9815) and Binbrook (NLM-9A42AE), and a further unprovenanced piece (NLM-DA8062). A smaller number of fake Iron Age coins have also been reported. These fake coins are thought to have been scattered across local fields where detectorists operate, either as a practical joke, disincentive to detect or as a grudge. At Hatcliffe Top these forgeries are quite distinctive for their weight, relatively small size and poorly defined imagery.

7.14.3 Some aspects of the Coins recovered at Hatcliffe Top

Steven Willis

Mr Stephenson's coins from around the turn of the 1960s comprised 19 Roman coins and one later coin, being a half penny of William and Mary. This group includes the three earliest Roman coins from Corner Field. The latter coins, together with the William and Mary coin have comparatively large flans and so would be more visible to the eye than third and fourth century Roman coins or indeed Saxon coins, the vast majority of which will have been much smaller.

This is significant since they were recovered by eye with no use of a metal detector. Why the subsequent detecting produced no such equivalent Roman coins is curious as Mr Stephenson (pers. comm.) collected his coins from the same general area of Corner Field as the majority of the detected coins were recovered. The time-gap in collecting and the different collection methods may be relevant, whilst in any case this was only a small number of coins. There is also a marked difference in the condition of Mr Stephenson's coins. Discounting these three earlier Roman coins which are older than the rest, of the fifteen coins amongst all the Roman coins from the site where it is not possible to give other than a broad date range eight (over half) are

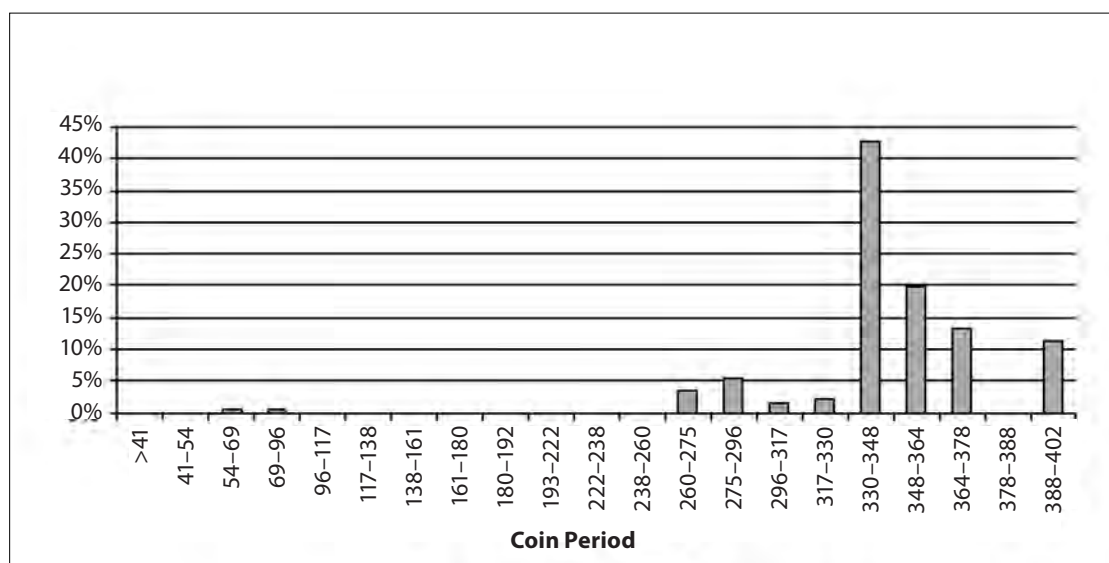


Fig. 7.29 Roman coins from Corner Field expressed as a percentage of the (identified) site total ($n=152$)

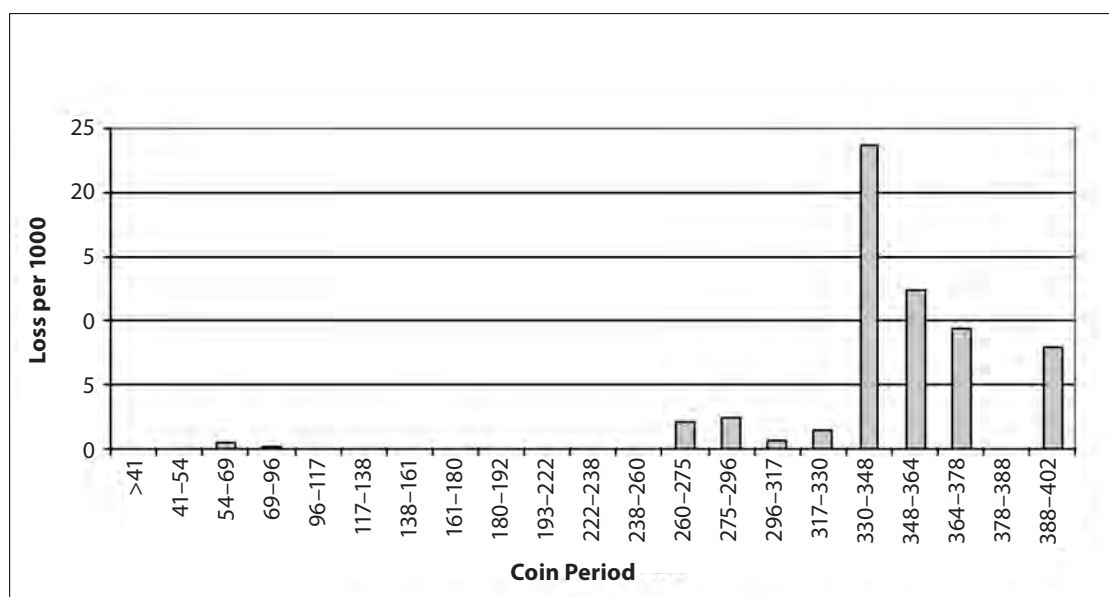


Fig. 7.30 Roman coins from Corner Field expressed in terms of annual loss per 1000

1 Coin RF No. 2089



6 Coin RF No. 15/21



2 Coin RF No. 3517



7 Coin RF No. 2179



3 Coin RF No. 3518



8 Coin RF No. 3502



4 Coin RF No. 4000



9 Coin RF No. 16/26



5 Coin RF No. 2093



10 Coin RF No. 16/25



0 1cm

Fig. 7.31 A selection of the Roman coins from Hatcliffe Top. See Table 7.7 for details.



Fig. 7.32 A selection of the Roman coins (left) and Anglo-Saxon coins (right) from Hatcliffe Top. See Table 7.7 for details.

from the Stephenson Collection. Examination of the coins of this collection shows them to be in a poorer state of preservation than the more recently gathered excavated and detected groups, being pitted, abraded and corroded. It is likely Mr Stephenson was recovering coins that had been in the ploughsoil for a very long time. Deeper ploughing as a result of the advent of bigger machinery since the 1960s has probably disturbed coins hitherto contained within stable soil environments and introduced them to the ploughsoil to be available for recovery by metal detecting in recent years. The better condition of the detected coins may be explained by the fact that perhaps the majority have not been in the dynamic and 'hostile' environment of modern ploughsoil for a prolonged period.

The five 'fantasy pieces' were all recovered by metal detecting near to the edge of Corner Field on its north-west side, near to the excavation trenches and so not reflecting the general distribution of coins within the field. This aspect may be explained if they were thrown into the field from the adjacent roadside. Or,

alternatively, they may have been dispersed by someone walking down the northern edge of the field within the hedge, by the easiest points of access to the field, and perhaps not moving on to the field if there was a standing crop. The first such disc recovered during the Project was in August 2009 although that season was the first occasion when conditions were suitably good for metal detecting. Of course the different types may have been planted at different times. It may be significant that the road running along the north side of the field is a convenient and obvious route to the Binbrook and Swinhope area for anyone heading to that locality from the major regional population concentration in Greater Grimsby. Metal analysis by XRF readily shows the anonymous composition of the pieces, consistent with their other distinctive characteristics. It is a statement of the significance and reception of ancient coins today that someone or some persons go to the length of producing these 'issues' while their scattering on Corner Field is another episode in the biography of the site.

Table 7.7 The coins from Corner Field, Hatcliffe Top. (SC - Stephenson Collection; P - recovered from field ploughsoil; the year in the final column is abbreviated to the last two numbers of each year 2007-2016, e.g. 2007 is abbreviated to 07, with 58 standing for the years in the 1950s and 1960s when Mr Stephenson collected his group).

Period	Emperor etc.	Description	Mint	Denomination	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
IA	Corieltavi?	Details illegible (fragment)	*	AR ½	Late C1 BC	*	VW	0.32	2022	P	09
3	'Claudius I'	Reverse illegible	*	As copy	c. 50-64	*	EW	3.66	2101	SC	58
4	Vespasian	FORT[VNA REDVCI] SC Fortuna stg. I.	Rome or Lyons	Dupondius	71-73	RIC 473 or 739	VW	8.94	2089	SC	58
13	Gallienus	APOLLINI CON[S] AVG Z Centaur walking r. (chipped)	Rome	Antonini.	267-268	RIC 163	W	1.83	2046	P	09
13	Claudius II	[IOVI] VICTOR[I] Jupiter stg. I.	Rome	Antonini.	268-270	RIC 54	SW/W	2.14	4005	4016	09
13	Claudius II	[SAL]V[S AVG] Salus stg. I.	Rome	Antonini.	268-270	RIC 98	VW	1.48	16/ 151	P	16
13	Claudius II	VIRTVS AVG B Virtus stg. I.	Rome	Antonini.	269-270	RIC 111	VSW	3.11	3517	3729	14
13	Claudius II	Rev. uncertain	*	Antonini.	268-270	*	VW/EW	2.06	16/27	P	16
14	'Claudius II, deified'	[CONSECR]ATIO Altar	*	Radiate copy	c. 274-286	Copy of RIC 261	W	0.83	15/26	P	15
14	'Tetricus I'	[P]AV [AVG] Pax stg. I.	*	Radiate copy	c. 274-286	Copy as RIC 100	SW	1.01	4002	4002	09
14	'Tetricus II'	[HILAR]IT[AS AVG] Hilaritas stg. I.	*	Radiate copy	c. 274-286	Copy of RIC 232	W (Corr)/W	2.10	14/41	P	14
14	Uncertain	Salus stg. I.	*	Radiate copy	c. 274-286	*	VW	0.98	2105	SC	58
14	Uncertain	Details illegible	*	Radiate copy	c. 274-286	*	EW	0.36	15/9	P	15
14	Uncertain	Details illegible. Silvered.	*	Radiate copy	c. 274-286	*	VW	0.75	16/13	P	16
14	Allectus	PAX AVG Pax stg. I., transverse sceptre	C-mint	Antonini.	293-296	RIC 91	SW	4.61	3518	3708	14
14	Allectus	VIRTVS AVG QL Galley I.	London	Quinarius	293-296	RIC 55	VSW	2.77	4000	4002	09
15	Constantine I	PRINCIPI IVVENTVTIS PLN	London	Nummus	307-310	RIC VI, London 112	W/SW (E)	5.79	2023	2029	09
15	Constantine I	S[OLI INVIC]TO COMITI T/F/ATR	Trier	Nummus	316	RIC VII, Trier 105	W	2.82	15/3	P	15
16	Constantine I	BEATA TRANQVILLITAS STR.	Trier	AE3	322	RIC VII, Trier 342	SW	3.23	15/23	P	15
16	Constantine II, Caesar	BEAT TRANQLITAS F/B/ [PLON]	London	AE3	322-323	RIC VII, London 257	W	2.61	2087	P	10
16	Constantius II, Caesar	PROVIDENTIAE CAESS STRU	Trier	AE3	326	RIC VII, Trier 480	W/SW	2.84	2029	P	09
17	House of Constantine	[V]RB[S ROMA] PLG	Lyons	AE3	330-335	As RIC VII, Lyons 242	VW	1.35	2090	SC	58
17	House of Constantine	[(VR]BS [ROMA] UPLG	Lyons	AE3	332	RIC VII, Lyons 257	VW (E)	1.60	2053	P	09
17	House of Constantine	VRBS ROMA TRP	Trier	AE3	330-331	RIC VII, Trier 522	SW	1.71	15/31	P	15
17	House of Constantine	[V]RB[S ROMA] TRS.	Trier	AE3	330-331	RIC VII, Trier 529	W/VSW	2.40	2054	P	09
17	House of Constantine	VRBS ROMA TRP×	Trier	AE3	332-333	RIC VII, Trier 547	W/SW	2.11	2032	P	09
17	House of Constantine	VRBS ROMA	*	AE3	330-335	*	W	1.48	2185	P	10
17	House of Constantine	[VRBS ROMA]	*	AE3	330-335	*	Enc	2.49	14/34	P	14

Table 7.7 continued.

Period	Emperor etc.	Description	Mint	Denomination.	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
17	House of Constantine	[CONSTANTINOPOLIS] TRP	Trier	AE3	330-331	RIC VII, Trier 523	VW	1.97	14/23	P	14
17	House of Constantine	CONSTANTINOPOLIS TRP.	Trier	AE3	330-331	RIC VII, Trier 530	SW	1.96	2093	SC	58
17	House of Constantine	[CONSTANTINOPOLIS]	*	AE3	330-335	*	EW	1.87	2107	SC	58
17	House of Constantine	CONSTAN[TINOPOLIS]	*	AE3/4	330-335	*	W	1.36	2172	P	10
17	Constantine II, Caesar	[GLORIA EXERCITVS] (2) .PLG	Lyons	AE3/4	330-331	RIC VII, Lyons 244	W	1.74	2064	P	09
17	Constantius II, Caesar	[GLOR]IA E[XERC]ITVS (2)	*	AE3	330-335	*	W	2.11	5001	5000	10
17	Constantius II, Caesar	GLORIA EXERCITVS (2)	*	AE3	330-335	*	W	1.59	16/9	P	16
17	Constantine I	[GLORIA EXERCITVS] (1)	*	AE4	335-337	*	W	1.40	2171	P	10
17	Constantine II, Caesar	[GLORIA EX]ERCITVS (1) PLG	Lyons	AE3	335	RIC VII, Lyons 271 var.	W	1.61	14/24	P	14
17	Constantine II, Caesar	GLORIA EXERC[ITVS] (1) .TRS[.]	Trier	AE3	335-337	RIC VII, Trier 591	W	1.41	15/20	P	15
17	Constantius II, Caesar	[GLOR]IA EXERCITVS (1) .TRP.	Trier	AE3	335-337	RIC VII, Trier 592	SW	1.65	15/28	P	15
17	Constantius II, Caesar	GLOR[IA EXERCITVS] (1) .TRS. (chipped)	Trier	AE3/4	335-337	RIC VII, Trier 592	SW	1.63	16/18	P	16
17	Delmatius, Caesar	[GLORIA] EXERCITVS (1) [.]TRS.	Trier	AE3/4	335-337	RIC VII, Trier 594	SW	1.44	2059	P	09
17	Constantius II	[GLORIA] EXERCITVS (1) Chi-Rho/[.]LG	Lyons	AE3/4	337-340	RIC VIII, Lyons 8	W	1.76	16/32	P	16
17	Constans	[GLOR]IA EXE[RCITVS] (1) U/PCONST	Arles	AE3	337-340	RIC VIII, Arles 13	VW/W	1.63	3519	3700	14
17	Constans	GLORIA [EXE]R[CITVS] (1) G/[PARL] (chipped)	Arles	AE3/4	340	RIC VIII, Arles 57 or 58	W	0.70	16/20	P	16
17	Constans	GLORIA EXE[RCITVS] (1) Y/PLG (cracked surface)	Lyons	AE3	337-340	RIC VIII, Lyons 24	W	1.59	14/39	P	14
17	Constans	GLORIA EXERCITVS (1) M/TRPU	Trier	AE3	337-340	RIC VIII, Trier 111	SW	1.06	15/48	P	15
17	Constantius II or Constans	GLORIA EXER[CITVS] (1) .TR[P.]	Trier	AE3/4	335-340	RIC VII, Trier 592/593 or RIC VIII, Trier 58-62	SW	1.29	2052	P	09
17	House of Constantine	[GLORIA EXERCITVS] (1)	Arles	AE3	335-340	*	W	0.97	16/23	P	16
17	House of Constantine	[GLORIA E]XER[CIT]VS (1) .TRP.	Trier	AE3/4	335-340	As RIC VII, Trier 590	EW/W	1.29	2051	P	09
17	Helena	[PAX PVBLICA] [T]RP	Trier	AE4	337-340	As RIC VIII, Trier 78	W	1.31	1005	P	07
17	Helena	PAX PV[BLICA] T[RP]	Trier	AE4	337-340	As RIC VIII, Trier 78	SW	1.70	2175	P	10
17	Helena	PA[X PV]BLICA TRP branch	Trier	AE3	337-340	RIC VIII, Trier 90	W/SW	1.67	16/29	P	16
17	Helena	PAX PVBLICA TRS branch	Trier	AE3/4	337-340	RIC VIII, Trier 90	SW	1.61	14/21	P	14

Table 7.7 continued.

Period	Emperor etc.	Description	Mint	Denomination.	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
17	Helena	[PAX PVBLICA] (chipped)	*	AE3/4	337-340	*	W/VW	1.15	2065	P	09
17	Helena	[PAX PVBLICA]	*	AE3	337-340	*	VW/W (Enc)	1.37	14/27	P	14
17	Helena	[P]A[X PVBL]ICA	*	AE3	337-340	*	W (Corr)	1.36	15/21	P	15
17	Theodora	[P]I[ETAS] ROM[ANA] [T]R[P]	Trier	AE4	337-340	As RIC VIII, Trier 79	W	1.15	2176	P	10
17	Theodora	PIET[AS RO]MANA TRS branch	Trier	AE3/4	337-340	RIC VIII, Trier 91	SW	1.15	16/16	P	16
17	'House of Constantine'	VRB[S ROMA] (copy)	*	AE4 copy	c. 335-345	*	VW	1.17	2028	P	09
17	'House of Constantine'	[VRBS] ROM[A] (copy)	*	AE4 copy	c. 335-345	*	EW	1.05	2086	P	10
17	'House of Constantine'	VR[BS ROMA] (copy)	*	AE4 copy	c. 335-345	*	VW	0.62	2097	SC	58
17	'House of Constantine'	VRBS [ROMA] .PL[G] (copy)	'Lyons'	AE4 copy	c. 335-345	Copy of RIC VII, Lyons 247	W	1.24	2055	P	09
17	'House of Constantine'	[CONSTAN]TI[NOPOLIS] (copy)	*	AE4 copy	c. 335-345	*	VW	1.13	2049	P	09
17	'House of Constantine'	[CONSTANTINOPOLIS] (copy) (fragment)	*	AE4 copy	c. 335-345	*	VW	0.44	14/20	P	14
17	'House of Constantine'	[CONSTANTINOPOLIS] (copy) (chipped)	*	AE4 copy	c. 335-345	*	VW/EW	0.80	14/49	P	14
17	'House of Constantine'	CON[STANTINOPOLIS] (copy) (chipped)	*	AE4 copy	c. 335-345	*	W	0.79	16/33	P	16
17	'Constantine I'	[GLORIA E]XERCITVS (2) TR.P (copy)	'Trier'	AE4 copy	c. 335-345	Copy of RIC VII, Trier 537	SW	0.86	2043	P	09
17	'House of Constantine'	[GLORIA EXERCITVS] (2) (copy)	*	AE3/4 copy	c. 335-345	*	EW	0.80	14/15	P	14
17	'House of Constantine'	GLORIA EXERCITVS (2) (copy)	*	AE4 copy	c. 335-345	*	W	1.16	16/3	P	16
17	'Constantine II'	[GLORIA EXER]CITVS (1) TRP branch (copy)	'Trier'	AE4 copy	c. 337-345	Copy of RIC VIII, Trier 81	W	1.03	15/29	P	15
17	'Constans'	GLORIA EXERCITVS (1) TRS (copy)	'Trier'	AE4 copy	c. 335-345	*	W	1.41	2095	SC	58
17	'House of Constantine'	[GLORIA EXERCITVS] (1) SL[G] (copy)	'Lyons'	AE4 copy	c. 335-345	*	W	0.81	14/36	P	14
17	'House of Constantine'	[GLORIA EXERCITVS] (1) (copy)	*	AE4 copy	c. 335-345	*	SW	0.59	2060	P	09
17	'House of Constantine'	[GLORIA EXERCITVS] (1) (copy)	*	AE4 copy	c. 335-345	*	W/VW	1.06	15/1	P	15
17	'House of Constantine'	[VRB]S [ROMA] / [GLORIA EXERCITVS] (2) (muled copy)	*	AE4 copy	c. 335-345	*	VW	1.09	14/29	P	14
17	Constantius II	[VICT]ORIAE D[D AVGG Q NN] Star/[T]R[]	Trier	AE3	347-348	RIC VIII, Trier 187	VW	1.06	16/152	P	16
17	Constantius II	[VICTORIAE DD AVGG] Q NN	*	AE3	347-348	*	VW	1.11	14/35	P	14
17	Constans	VICTORIAE DD [AVGG Q NN] [TRP]	Trier	AE3	347-348	RIC VIII, Trier 186	W	1.51	15/71	P	15
17	Constans	[VICTORIAE] DD AVGG Q NN D/TRP	Trier	AE3	347-348	RIC VIII, Trier 196	W	1.45	15/2	P	15
17	Constans	VIC[TORIAE DD AVGG Q] NN Branch TRS	Trier	AE3/4	347-348	As RIC VIII, Trier 205	VW	1.82	16/21	P	16
17	Constans	VICTORIAE DD [AVGG Q NN] Branch/TRP. (chipped)	Trier	AE3	347-348	RIC VIII, Trier 209	VW/W	1.14	15/6	P	15

Table 7.7 continued.

Period	Emperor etc.	Description	Mint	Denomination	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
17	Constans	VICTORIAE DD AVGG Q NN Branch/TRP.	Trier	AE3	347-348	RIC VIII, Trier 209	VW	1.33	15/8	P	15
17	Constans	VICT[ORIAE DD AVGG Q NN]	*	AE3/4	347-348	*	W	1.45	2062	P	09
17	House of Constantine	[VICTORIAE DD AVGG Q NN]	*	AE3/4	347-348	*	EW/VW	1.51	4009	4044	09
17	House of Constantine	[VICTORIA]E DD [AV] GG Q NN Branch/[] (chipped)	*	AE3/4	347-348	*	W	1.02	15/7	P	15
17	'Constans'	VICTORIA[E DD AVGG Q NN] (fictitious mintmark) (copy)	*	AE4 copy	c. 347-348		W	0.87	15/70	P	15
18	Constantius II	FEL TEMP REPARATIO (falling horseman) CSLG	Lyons	AE3	353-360	RIC VIII, Lyons 189	UW	2.32	2179	P	10
18	Constantius II	[FEL TEMP REPARATIO] (falling horseman) (copy?)	*	AE3	353-361	*	VW	1.72	2050	P	09
18	Constantius II	[FEL TE]MP RE[PARATIO] (falling horseman) (chipped)	*	AE3	353-361	*	VW	1.09	2170	P	10
18	Constantius II	[FEL TEMP REPARATIO] (falling horseman) (chipped)	*	AE3	353-361	*	W/VW	1.89	16/14	P	16
18	Constantius II	[FEL TEMP REPARATIO] (falling horseman) (copy?)	*	AE3	353-361	*	W	1.70	16/15	P	16
18	Constantius II	[FEL TEMP REPARATIO] (falling horseman) (copy?)	*	AE3/4	353-361	*	VW	1.56	16/2	P	16
18	Constantius II	[FEL TEMP REPAR]ATIO (falling horseman) Cut-down frag. of official coin	*	AE4	353-361	*	SW	0.34	16/5	P	16
18	House of Constantine	[FEL TEMP R]EPAR[ATIO] (falling horseman)	*	AE3	353-361	*	VW	2.10	15/5	P	15
18	House of Constantine	[FEL TEMP REPARATIO] (falling horseman)	*	AE3	353-361	*	VW	1.55	15/22	P	15
18	'Constantius II'	[FEL TE]MP REPARA[TIO] (falling horseman) PLG (copy)	'Lyons'	AE3 copy	c. 355-365	*	W	1.49	16/22	P	16
18	'Constantius II'	[FEL TEMP REPARATIO] (falling horseman) [T] RSU (copy)	'Trier'	AE4 copy	c. 355-365	Copy of RIC VIII, Trier 359	VW	0.59	1006	P	07
18	'Constantius II'	[FEL TEMP REPARATIO] (falling horseman) TRVS (copy)	'Trier'	AE3 copy	c. 355-365	Copy of RIC VIII, Trier 359	SW	1.94	4006	4029	09
18	'Constantius II'	[FEL TEMP REPARATIO] (falling horseman) (copy) (obv double-struck)	*	AE3 copy	c. 355-365	*	W	1.96	2047a	P	09
18	'Constantius II'	[FEL TEMP REPA]RATIO (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	W	1.36	2094	SC	58
18	'Constantius II'	[FEL TEMP RE]PARATIO (falling horseman) (copy)	*	AE3/4 copy	c. 355-365	*	W	1.31	16/28	P	16
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	W	0.93	1002	1031	07
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	VW	0.49	1007	P	07
18	'House of Constantine'	[FEL TEMP REPA]RAT[IO] (falling horseman) (copy)	*	AE3 copy	c. 355-365	*	W	1.25	2025	P	09
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	W/VW	1.69	2027	P	09

Table 7.7 continued.

Period	Emperor etc.	Description	Mint	Denomination.	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy) (chipped)	*	AE4 copy	c. 355-365	*	EW	0.31	2035	P	09
18	'House of Constantine'	[FE]L TE[MP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	W	0.61	2037	P	09
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	W/SW	0.74	2038	P	09
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	VW/EW	1.19	2058	P	09
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	W	1.06	2067	P	09
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	EW	0.45	2100	SC	58
18	'House of Constantine'	[FEL TEMP REPARA]TIO (falling horseman) (copy) (chipped)	*	AE4 copy	c. 355-365	*	VW	0.81	15/40	P	15
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	VW	0.75	15/50	P	15
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	VW/EW	0.55	16/11	P	16
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE3 copy	c. 355-365	*	EW	1.78	16/19	P	16
18	'House of Constantine'	[FEL TEMP REPARATIO] (falling horseman) (copy)	*	AE4 copy	c. 355-365	*	VW/EW	0.56	16/24	P	16
19	Valentinian I	GLORIA RO[MAN]ORVM LVG.S	Lyons	AE3	364-367	LRBC 2, 281	VW/W	2.29	2063	P	09
19	Gratian	[GLOR]IA RO[MANORVM]	*	AE3	367-378	*	VW	1.82	15/45	P	15
19	Gratian or Valentinian II	[GLORIA ROMANORVM]	*	AE3	367-378	*	EW	2.43	2103	SC	58
19	Valentinian I	SECVRTAS REIPVBLICAE OF/I/CONST	Arles	AE3	364-367	LRBC 2, 481	W	1.70	2184	P	10
19	Valentinian I	SECVRTAS REIPVBLICAE CON	Arles	AE3	367-375	LRBC 2, 515	SW	2.42	16/26	P	16
19	Valentinian I	[SECVRTAS RE]IPVBLICAE PCON (chipped)	Arles	AE3	367-375	LRBC 2, 527	SW/W	1.90	2036	P	09
19	Valentinian I	[SECVRTAS REIPVBLICAE] SCON (fragment)	Arles	AE3	364-375	*	SW	0.74	2021	2026	09
19	Valentinian I	[SECV]RTAS REIPVBLICAE]	*	AE3	364-375	*	SW	2.34	2026	P	09
19	Valens	S[ECVRITAS] REIPVBLICAE Wreath/ / SMAQS	Aquileia	AE3	367-375	LRBC 2, 1031	W	2.05	3520	3713	14
19	Valens	SECVRTAS REIPVBLICAE SCON (chipped)	Arles	AE3	367-378	As LRBC 2, 528	W/SW	2.04	2040	P	09
19	Valens	SECVRTAS REIPVBLI[CAE] SCO[N]	Arles	AE3	367-378	As LRBC 2, 528	W	2.46	15/52	P	15
19	Valens	SECVRTAS REIPVBLICAE [L]VGP[]	Lyons	AE3	364-375	*	W	1.95	2039	P	09
19	Valens	SECVRTAS [REIPVBLICAE] SM RP	Rome	AE3	367-378	LRBC 2, 725 or 730	W	2.51	16/10	P	16
19	Valens	SECVRTAS REIPVBLICAE RA/F/ASISCP	Siscia	AE3	367-375	LRBC 2, 1416	SW	2.47	3502	3505	10
19	Valens	SECVRTAS REIPVBLI[CAE]	Arles or Lyons	AE3	364-375	*	W	2.12	16/12	P	16
19	Valens	[SECVR]ITAS [REIP]VBLICAE	*	AE3	364-378	*	VW (E)	2.51	4010	4036	09

Table 7.7 continued.

Period	Emperor etc.	Description	Mint	Denomination	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
19	Gratian	[SECVRITAS] REIPVBLICAE	*	AE3	367-378	*	VW	1.56	2178	P	10
19	House of Valentinian	[SECVRITA]S REIPVB[LICAE] (chipped)	Arles or Lyons	AE3	364-375	*	EW/VW	2.20	16/8	P	16
19	Gratian	GLORIA [NOVI SAECVLI] (fragment)	Arles	AE3	367-375	*	VW/W	1.32	2061	P	09
19	Gratian	[GLORIA NOVI SAECVLI]	Arles	AE3	367-375	*	VW/EW	2.03	16/7	P	16
21	Uncertain	[VIRTVS ROMANORVM] (frag.) (clipped)	*	Siliqua	388-392	*	SW	0.61	14/33	P	14
21	Valentinian II	[S]ALVS RE[IPVBLICAE] R.P	Rome	AE4	388-392	LRBC 2, 799	W/VW	1.13	4003	4000	09
21	Valentinian II	SALVS REIPVBLICAE R.P	Rome	AE4	388-392	LRBC 2, 799	W	1.21	2174	P	10
21	Arcadius	[SA]LVS R[EI]PVBLIC[AE] AQS	Aquileia	AE4	388-393	LRBC 2, 1107	W	1.17	2045	P	09
21	Arcadius	SALVS REI[PUBLICAE] RE	Rome	AE4	388-393	LRBC 2, 801	SW	1.38	1004	P	07
21	Arcadius	[SALVS REIPVB]LIC[AE]	*	AE4	388-402	*	VW	1.20	2088	P	10
21	Theodosius I	SALVS REIPVBLIC[AE] R.[]	Rome	AE4	388-395	LRBC 2, 800 or 804	SW	0.97	2003	3011	08
21	House of Theodosius	SALV[S REIPVBLICAE] R[] (chipped)	Rome	AE4	388-402	*	VW	0.85	15/44	P	15
21	House of Theodosius	[SALVS REIPVBLICAE]	*	AE4	388-402	*	VW	1.09	2020	2026	09
21	House of Theodosius	[SALVS REIPVBLICAE]	*	AE4	388-402	*	W/VW	1.02	2066	P	09
21	House of Theodosius	[SALVS REIPVBLICAE]	*	AE4	388-402	*	EW/VW	1.30	15/47	P	15
21	House of Theodosius	[SALVS REIPVBLICAE]	*	AE4	388-402	*	EW	1.17	15/51	P	15
21	House of Theodosius	[SALV]S REI[PVBLICAE] (copy?)	*	AE4	388-402	*	W	0.81	16/1	P	16
21	Arcadius	[VICTORI]A AVGG[G] TCON	Arles	AE4	388-392	LRBC 2, 566	W	0.97	16/25	P	16
21	Theodosius I	[VICTOR]IA AVGGG	*	AE4	388-395	*	SW/W	1.38	2000	2001	08
21	House of Theodosius	[VICTOR]IA AVGGG	*	AE4	388-402	*	W	1.04	2041	P	09
21	House of Theodosius	Rev. uncertain (Victory walking l.) (holed)	*	AE4	388-402	*	VW/EW	1.06	4008	4026	09
*	Uncertain	Details illegible (pitted)	Rome	Sestertius	C1-C2	*	EW	15.5	2091	SC	58
*	Uncertain	Illegible fragment	*	Antonini.	c. 260- 296	*	VW	1.12	14/32	P	14
*	'House of Constantine'	Details illegible	*	AE4 copy	c. 335- 365	*	EW	0.89	14/26	P	14
*	'House of Constantine'	Details illegible	*	AE4 copy	c. 335- 365	*	EW	0.58	16/ 150	P	16
*	Illegible	Details illegible	*	AE4 copy	c. 270- 365	*	EW	0.56	2096	SC	58
*	Illegible	Details illegible	*	AE4 copy	c. 270- 365	*	EW	1.08	2098	SC	58
*	Illegible	Details illegible	*	AE4 copy	c. 270- 365	*	EW	0.27	6001	6000	10
*	Illegible	Indecipherable (not certainly a coin)	*	AE4 copy	c. 270- 365	*	EW/VW	0.50	2047b	P	09
*	Uncertain	Reverse illegible	*	AE3	c. 330- 378	*	EW	1.42	2104	SC	58
*	Illegible	Details illegible	*	AE3	c. 260- 378	*	EW	1.37	2106	SC	58

Table 7.7 continued.

Period	Emperor etc.	Description	Mint	Denomination	Date	Reference	Condition	Weight (gm)	RF No.	Context	Year
*	Uncertain	Rev. illegible	*	AE4	c. 378-402	*	EW	1.36	4007	4026	09
*	Uncertain	Details illegible	*	AE4	c. 378-402	*	EW	1.22	15/43	P	15
*	Uncertain	Details illegible	*	AE4	c. 335-402	*	EW	1.21	16/17	P	16
*	Illegible	Details illegible	*	AE4 copy?	c. 335-402	*	EW	1.27	2099	SC	58
*	Illegible	Details illegible	*	AE4	c. 270-402	*	EW	1.87	2102	SC	58
*	Uncertain	Reverse illegible	*	Base AR?	C4	*	VW/EW	1.75	2108	SC	58
*	*	Series D, type 2c (imitative)	*	Sceatta	c. 700-715	*	VSW	1.06	16/4	P	16
*	*	Series E, VICO variety 2 (I on rev has extra pellet)	*	Sceatta	c. 700-710	North 45 var.	UW	1.12	2042	P	09
*	*	Series G (BMC 3a)	*	Sceatta	c. 710-720	North 43	SW	1.00	2180	P	10
*	*	Series G, type G2d (imitative subsidiary)	*	Sceatta	c. 710-720	*	W/SW	0.96	16/6	P	16
*	*	Series X (BMC 31) var. e/A	Ribe	Sceatta	c. 710-720	North 116	SW	0.98	14/22	P	14
*	Elizabeth I	4th issue - mm. Latin cross	London	Penny	1580-1581	Spink 2575	SW/W	0.57	2044	P	09
*	William & Mary	*	*	Halfpenny	1694	Spink 3452	VW/EW	6.60	2092	SC	58
*	George III	*	*	1/4 guinea	1762	Spink 3741	W	1.72	2169	P	10
*	Elizabeth II	Decimal series	*	10 pence	1970	*	W	11.2	X	4000	09
*	Nigeria	*	*	1 kobo	1973	*	W	5.37	X	P	09
*	Elizabeth II	Decimal series	*	2 pence	1994	*	Corr.	7.06	15/72	P	15
*	*	Fantasy piece in lead alloy. Plain/horse r, pellet-ring above	*	'IA Unit'	Modern	*	*	1.80	2034	P	09
*	*	Fantasy piece in lead alloy. ?Boar/horse l., pellet ring above	*	'IA Half unit'	Modern	*	*	0.81	6002	6000	10
*	*	Fantasy piece in lead alloy. ?Boar/horse l., pellet ring above	*	'IA Half unit'	Modern	*	*	0.86	14/31	P	14
*	*	Fantasy piece in lead alloy. Quincunx/ Porcupine r.	*	'Sceatta'	Modern	*	*	1.70	14/30	P	14
*	*	Fantasy piece in lead alloy. Quincunx/ Porcupine r.	*	'Sceatta'	Modern	*	*	1.44	15/27	P	15

7.14.4 Applied numismatic analysis of the Roman Coins from Hatcliffe Top by 'Reece period'

Caroline Farquhar

Background and Methodology

Of the Roman coins from Hatcliffe Top identified by David Holman, some 152 are specifically dated (Table 7.7). Accordingly, these dateable coins were assigned to issue periods (cf. above). The present study uses these data to widen the comparison, with the aim of placing the Hatcliffe Top coin list in a broader context. The study follows the periodization method outlined by Reece and employed by Holman (see Table 7.8 for Reece periods apropos rulers and dates); a minimum of 100 coins per site/collection was considered sufficient by Reece for this type of numismatic analysis (Reece 1991; Walton 2011, 50). The Hatcliffe Top list was then used to calculate a 'coins per mill' (coins per thousand) 'mean' value for each Reece period based on the following calculation:

$$\frac{\text{Total number of coins in each period}}{\text{Total number of coins in the assemblage}} \times 1000$$

Figure 7.30 (created by Holman) shows the coins per thousand data by Reece period (RP) based on Table 7.8. In itself, using a single set of coin loss mean values data, such as given in this figure has its limits in terms of the information that can be extracted. It is possible to discern a date range, likely first and last dates of coin loss and likely peak activities; however, by itself it is not possible to assess whether this coin loss is 'normal' for the type of site, or for the region. Importantly it is not a direct index of site activity periods, wealth or economic enterprise, as a complex set of factors effected the issuing of coins, their circulation, loss and recovery (cf. Casey 1986, 69; Reece 2002, 98-100). Rather, it can provide the basis for comparison with the profile of site coin loss per period with other sites, to establish similarities and differences that may lead to insight or require explanation. By using comparative data from other sites, and employing regional or national data, it is possible to more effectively infer interpretations regarding the coin assemblage profile and the activity at the site in question and its character.

In this case comparative data can be obtained from a number of published sources. Reece produced a data-set known as 'Reece's British Mean' which showed

coin loss frequency by RP gathered from a large number of sources, approximately 242 archaeological sites (Walton 2011, 64) Reece's British Mean was often used as the standard comparator for measuring difference from an expected British 'normal' coin frequency pattern. However, Reece's mean was largely gathered from data collected from archaeological excavations and museum collections and with time it became apparent to Reece and others that it may not be representative for Britain as a whole (Walton 2011, 65). Reece's data-collection pre-dated the era of developer-funded excavations and the institution of the Portable Antiquities Scheme that has systematically logged finds made by metal-detectorists. Hence, certain types of sites such as small towns, roadside settlements and rural (particularly non-villa) sites of the Roman era that have received greater attention and data collection in the past 30 years are now better understood and their coin assemblage lists can now complement Reece's sample. Hence a more recent national British mean has been produced by Walton, including hitherto underrepresented sites, known

Table 7.8 The Reece Periods (RPs).

Reece period	Dates	Ruler/Period of Rulers
1	Pre-AD 41	Pre-Claudian
2	41-54	Claudian
3	54-68	Neronian & Civil Wars
4	69-96	Flavian
5	96-117	Trajanic
6	117-138	Hadrianic
7	138-161	Antonine I
8	161-180	Antonine II
9	180-193	Antonine III
10	193-222	Severus to Elagabalus (Severan I)
11	222-238	Later Severan (Severan II)
12	238-260	Gordian III to Valerian
13	260-275	Gallienus (sole reign) to Aurelian
14	275-296	Tacitus to Allectus
15	296-317	The Tetrarchy
16	317-330	Constantinian I
17	330-348	Constantinian II
18	348-364	Constantinian III
19	364-378	Valentinianic
20	378-388	Theodosian I
21	388-402	Theodosian II
22	402-445	5 th Century I (Moorhead 2013, 5)
23	445-498	5 th Century II (Moorhead 2013, 5)

Table 7.9 Reece periods, the number of coins found of each Reece period at Hatcliffe Top, and the coins per mill values. (The asterisk denotes the two additional Reece periods added by Moorhead (Moorhead 2013); as no coins belonging to these periods were present the subsequent histograms do not include them).

Reece period	Number of coins	Coins per mill.
1	0	0.00
2	0	0.00
3	1	6.58
4	1	6.58
5	0	0.00
6	0	0.00
7	0	0.00
8	0	0.00
9	0	0.00
10	0	0.00
11	0	0.00
12	0	0.00
13	5	32.89
14	8	52.63
15	2	13.16
16	3	19.74
17	65	427.63
18	30	197.37
19	20	131.58
20	0	0.00
21	17	111.84
22*	0	0.00
23*	0	0.00
	152	1000

as Walton's British Mean ('WBM') (Walton 2011, 72-4). This mean uses coin data from 262,272 coin records including finds data from the PAS as well as comparative data sets from archaeological fieldwork covering 814 sites or parishes. Other comparative data are available for individual types of site (such as temples, military sites, urban sites) (Reece 1991) and for regions (such as north of the Fosse Way/south of the Fosse Way), and for individual counties (Walton 2011). By using this comparative data further suppositions can be made regarding a coin assemblage.

For this study I have selected the following comparator data. From Walton's PhD, the mean for the county of Lincolnshire (Walton 2011), from Reece's book (Reece 1991) the means for the following sites: Sapperton rural roadside settlement,

Lincolnshire, Old Winteringham which seemingly begins as an early Roman military site and port, North Lincolnshire, the city of Lincoln (four locations from Reece 1991: The Park, Flaxengate, St Marks and 'Lincoln various small sites' that I combined to create one Lincoln Mean) and that created for my research for the Mount Pleasant, Nettleton and Rothwell, site (hereafter Nettleton) a site examined by fieldwork as part of the wider Central Wolds Project (Tables 7.10 and 7.11). References to the excavation and site reports sourcing the coin data for these comparator means can be found within Walton's and Reece's publications together with the publication by Willis (Willis 2013; Holman 2013). The selection of these comparator means was made to investigate whether the Hatcliffe Top assemblage represented a typical or atypical profile compared to other Lincolnshire data and whether any further suppositions could be made. Selection of a range of sites and regional data (military, urban, rural sites, and county) aimed to enable a reasonable spread of types of site to be used, though Lincolnshire itself has less excavated Roman sites for its size compared with some other counties, so choices were somewhat restricted. Possibly other sites beyond the historic county would themselves have provided apt and useful comparisons.

The majority of the coins from Hatcliffe Top were recovered using metal detectors and were found over a wide area. It is likely that recovery will have been more systematic than would normally occur 'by eye' on an excavation with probably a higher level of recovery of smaller coins of lesser weight than for some of the comparative data (particularly the older excavations in the Reece data). The Walton and Nettleton coin data will have been recovered in a similar manner to the Hatcliffe Top recovery methods, facilitating more robust comparisons.

The fundamental trends in the Hatcliffe Top coin data are outlined by Holman and the present examination develops from those observations. The RP approach has a potential distortional factor as the primary apparent activity at the site was within the RPs 13 to 21, not before. In recognition of this factor I also recalculated mean values for the Hatcliffe Top data to span RPs 13 to 21 only and then plotted this new mean against comparative data for Lincolnshire as a whole and Lincolnshire site means that had their mean values similarly recalculated to cover only RPs 13 to 21. In this way, the aim was to enable a fairer comparison for the period when Hatcliffe Top was active thereby effectively excluding the comparative data before Hatcliffe Top's apparent active phase.

Previous research on the Nettleton data by Holman (2013 and above) found that that site apparently went

into a decline in coin loss activity from around RP 16 (AD 317-330) with a more drastic apparent decline from RP 17 (AD 330-348) and no coin loss activity for RPs 20 and 21 (AD 378-402). The research for the Hatcliffe Top assemblage found a profile where heavy activity appeared to start as Nettleton declined. I have therefore also included a blended Nettleton/Hatcliffe Top assemblage to explore if it is possible to see the two assemblages as explained as 'one community' that perhaps moved from one site to the other or as a *representation* of shifting communities in the area at this time.

The comparative data values are presented in Tables 7.10 to 7.11 showing coins per mill data and total numbers of coins for each comparator region or site and the recalculated means covering RPs 13 to 21, where relevant.

Analysis

Comparison to the Lincolnshire county Mean

Figure 7.33 shows the Hatcliffe Top assemblage compared to the Lincolnshire county Mean using data for all RPs. As can be seen, Hatcliffe Top differs from the Lincolnshire Mean in having very limited coin loss in the earlier periods. From RPs 13 to 16 (AD 260-330), Hatcliffe Top appears to have lower than might be expected coin loss compared to the Lincolnshire county Mean and above average loss for RPs 17 to 18 (AD 330-364) and for RP 21 (AD 388-402). In RPs 19 and 20 (AD 364-388), the coin loss is approximately as might be expected. However, as previously stated, there is a potential distortional effect (showing apparently higher values) caused by calculating the coins per mill for the Hatcliffe Top data over a smaller number of RPs, whereas, the Lincolnshire county data covers a wider number of RPs. Recalculating the coins per mill values for both the Lincolnshire county data and the Hatcliffe Top data for RPs 13-21 enables a more chronologically focussed comparison. Figure 7.34 shows the histogram for these data. The pattern of lower and higher expected coin loss at Hatcliffe Top as noted in Figure 7.33 continues but is of less magnitude.

Comparison with Sapperton

Figure 7.35 shows the Hatcliffe Top assemblage compared to that for Sapperton. This site was selected as a comparator for several reasons. It was a rural centre (roadside settlement) extending over c. 40 acres, with occupation continuing into the Late Roman era, and lies within Lincolnshire, although to the south of

Lincoln and about 70 km south-east of Hatcliffe Top (Simmons 1976; 1985; 1988; 1995; Oetgen 1986). At first sight, it is notable that Hatcliffe Top mirrors the general profile of Sapperton much more closely than it does the Lincolnshire county Mean, with both settlements having apparently higher activity to the mid- and Late Roman era. Hatcliffe Top does differ from the Sapperton profile in having no coin loss values for many of the RPs from RP 1 to 12 (pre- AD 41 invasion to AD 260) whereas Sapperton generally has almost continuous coin loss from RP 2 (AD 41-54). Hatcliffe Top has lower than expected coin loss compared to Sapperton for RPs 13 to 14 (AD 260-296), however, the fact that both settlements appear to begin a period of high activity from these RPs could be significant to indicate similarities in activity. Both settlements continue to have coin loss until the end of the Roman era, including a very similar profile for RP 21 (AD 388-402). Given the difference already noted from the general Lincolnshire coin loss activity in RP 21 (very much lower than Hatcliffe Top), could we surmise that both Hatcliffe Top and Sapperton were both different from the general Lincolnshire coin loss-generating activity at this time? Of note for Hatcliffe Top is the apparently very high coin loss during RP 17 (AD 330-348) compared to Sapperton.

The potential for distortion caused by using data over differing periods is reduced for the Sapperton comparator as it has a similar profile of coin loss over similar RPs as for Hatcliffe Top. None the less for completeness, Figure 7.36 shows the assemblages for Hatcliffe Top and Sapperton for RPs 13-21 only. As expected the profile is very similar to the full RPs plot.

Comparison with Old Winteringham

Figure 7.37 shows the Hatcliffe Top assemblage compared to that for Old Winteringham in North Lincolnshire. This site was occupied from the mid-first century AD with an evident early Roman military presence and a likely port facility at the end of Ermine Street. It is believed that the site continued into the fourth century. As can be seen, the Old Winteringham site has continuous coin loss for the RPs 1 to 12 (pre-invasion to AD 260) whereas Hatcliffe Top only has coin loss for RPs 3 and 4 (AD 54-96). Both Hatcliffe Top and Old Winteringham appear to have increased coin loss for RPs 13 and 14 (AD 260-296) but Hatcliffe Top's activity appears substantially less than the comparator. For RPs 15 to 19 (AD 296-378) and for RP 21 (AD 388-402), Hatcliffe Top has higher activity than Old Winteringham. The difference in RP 21 is particularly noticeable.

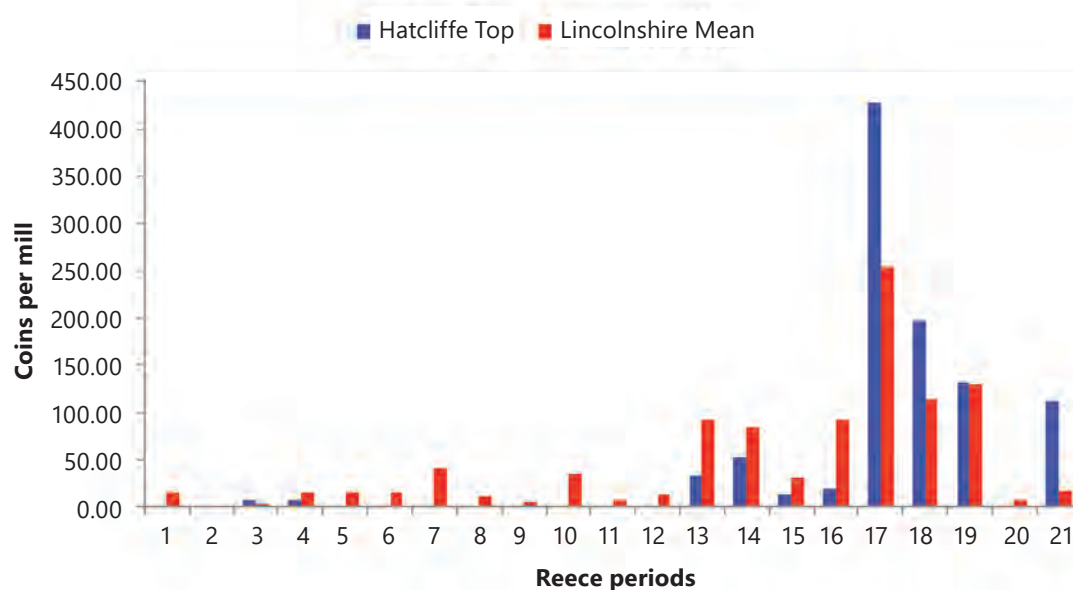


Fig. 7.33 The Hatcliffe Top assemblage compared to the Lincolnshire Mean.

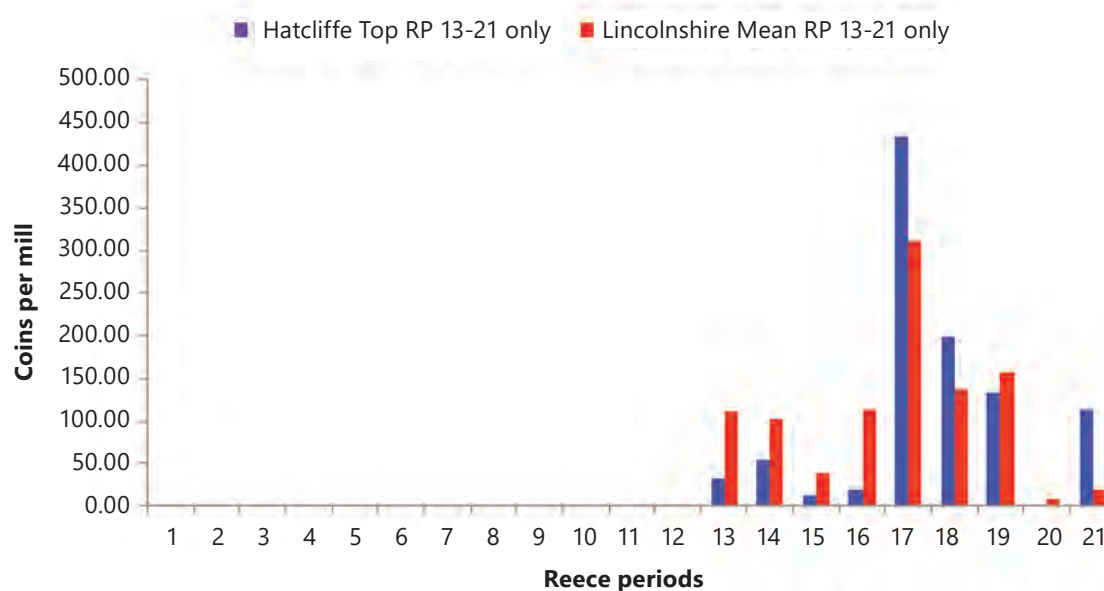


Fig. 7.34 The Hatcliffe Top assemblage compared to the Lincolnshire Mean, RPs 13-21 only.

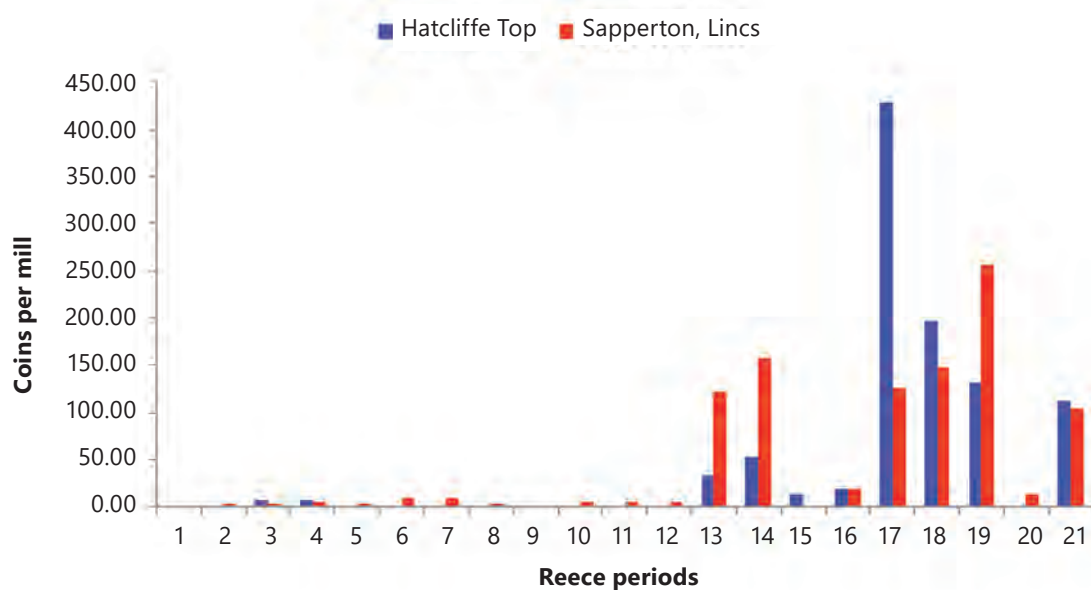


Fig. 7.35 The Hatcliffe Top assemblage compared to the assemblage from Sapperton.

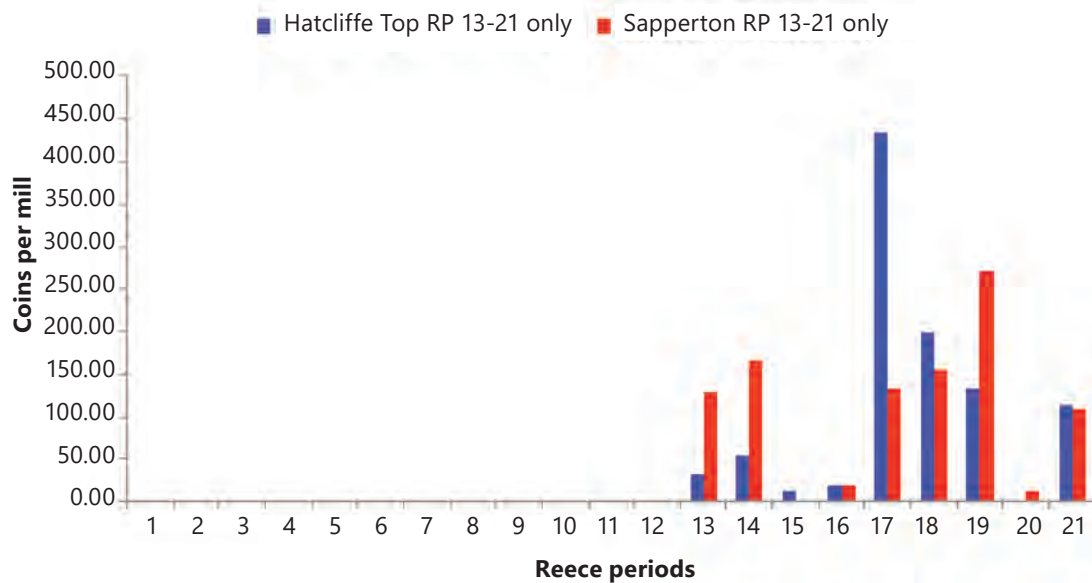


Fig. 7.36 The Hatcliffe Top assemblage compared to the assemblage from Sapperton, RPs 13-21 only.

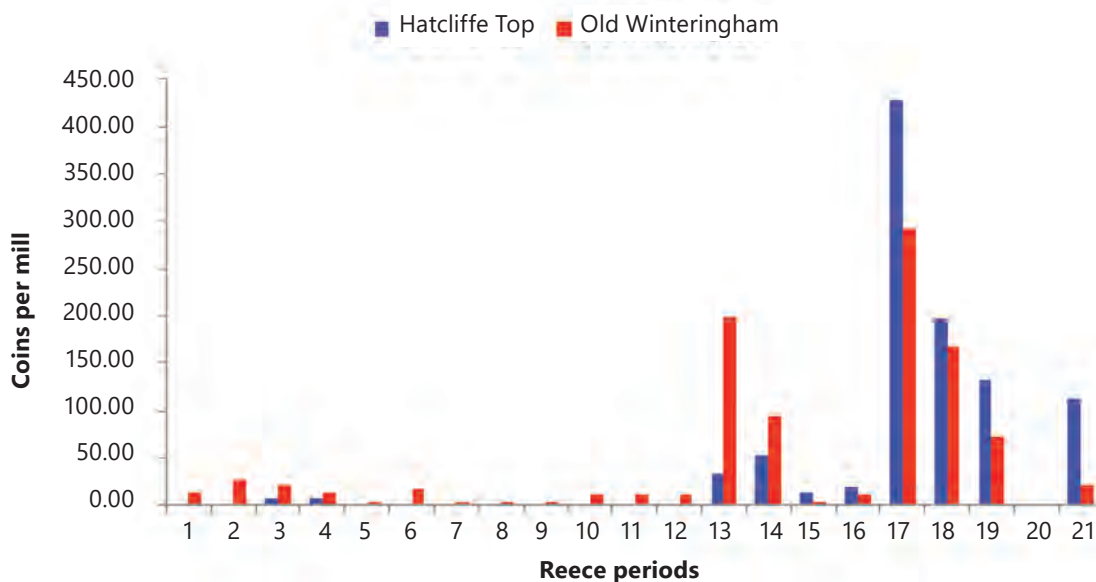


Fig. 7.37 The Hatcliffe Top assemblage compared to the assemblage from Old Winteringham.

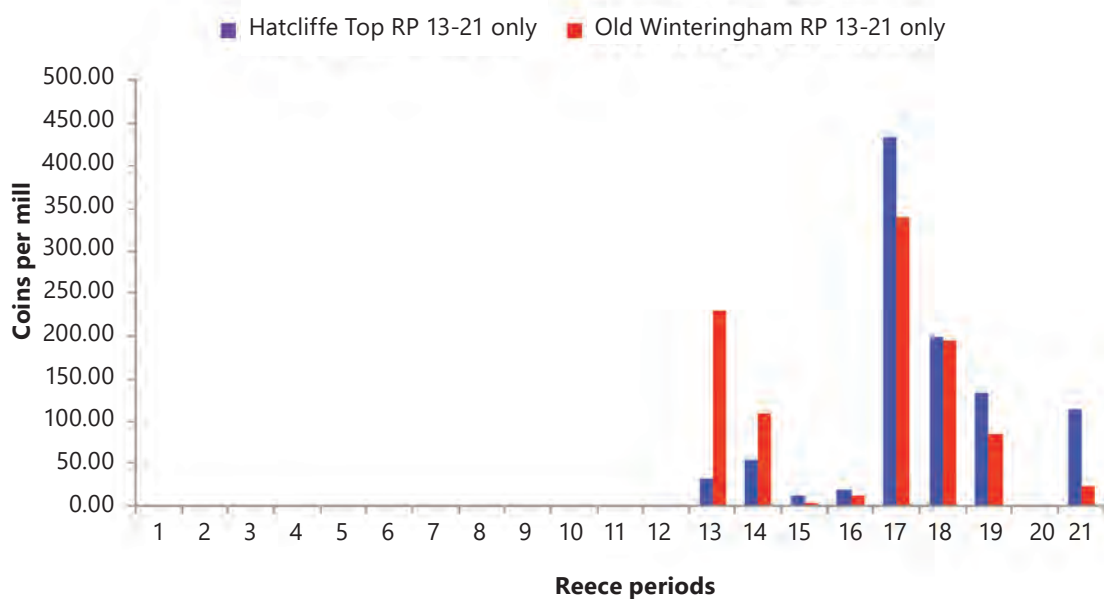


Fig. 7.38 The Hatcliffe Top assemblage compared to the assemblage from Old Winteringham, RPs 13-21 only.

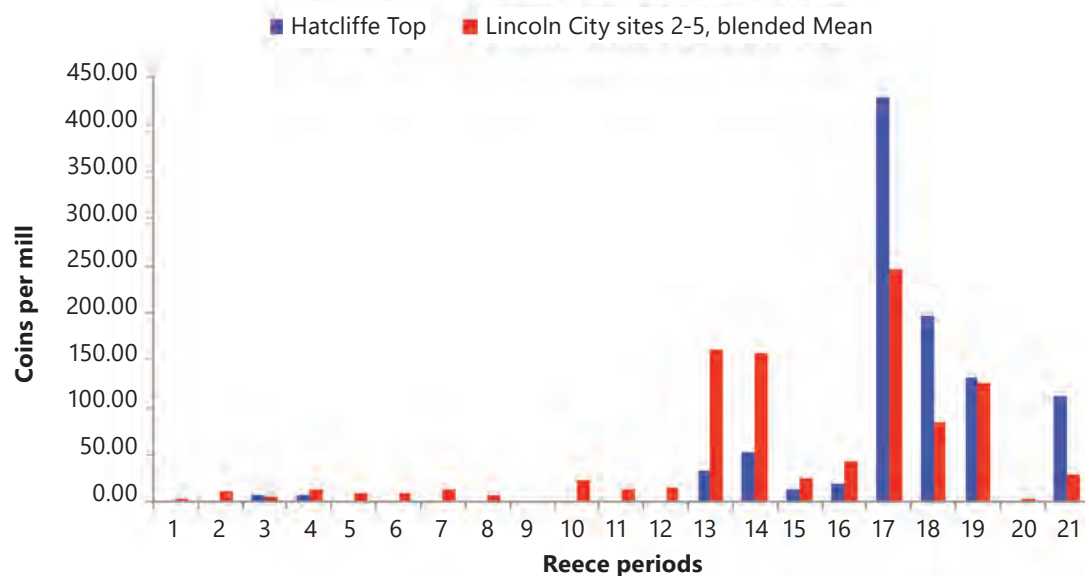


Fig. 7.39 The Hatcliffe Top assemblage compared to the blended Lincoln sites 2-5 Mean.

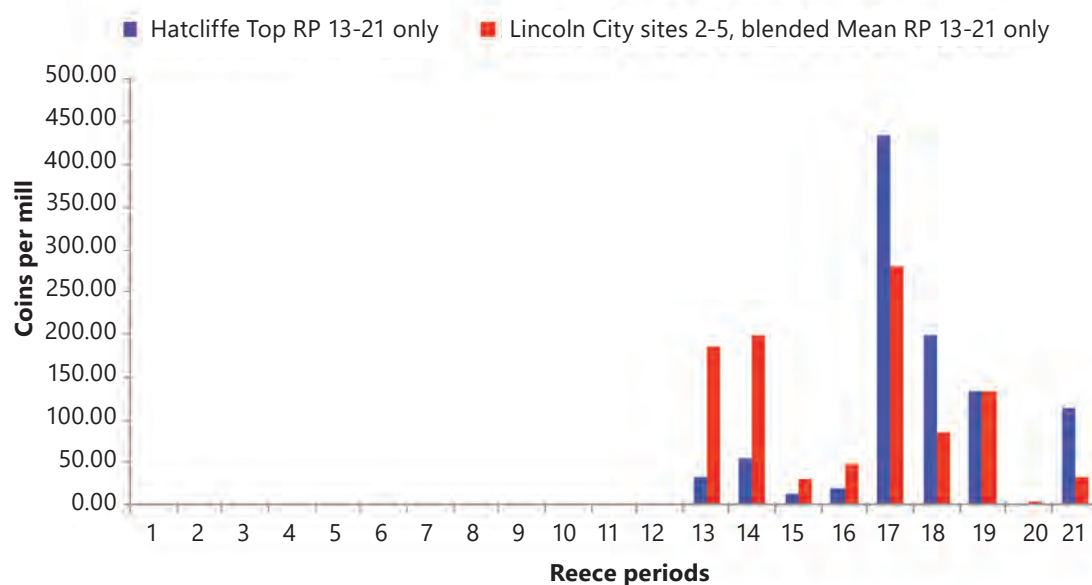


Fig. 7.40 The Hatcliffe Top assemblage compared to the blended Lincoln sites 2-5 Mean, RPs 13-21 only.

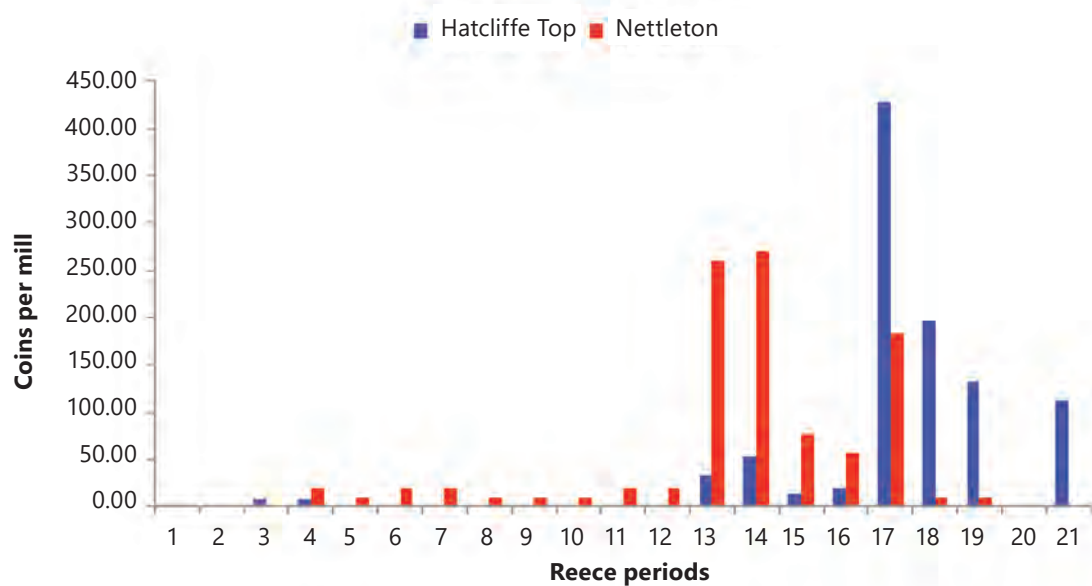


Fig. 7.41 The Hatcliffe Top assemblage compared to the assemblage from Nettleton.

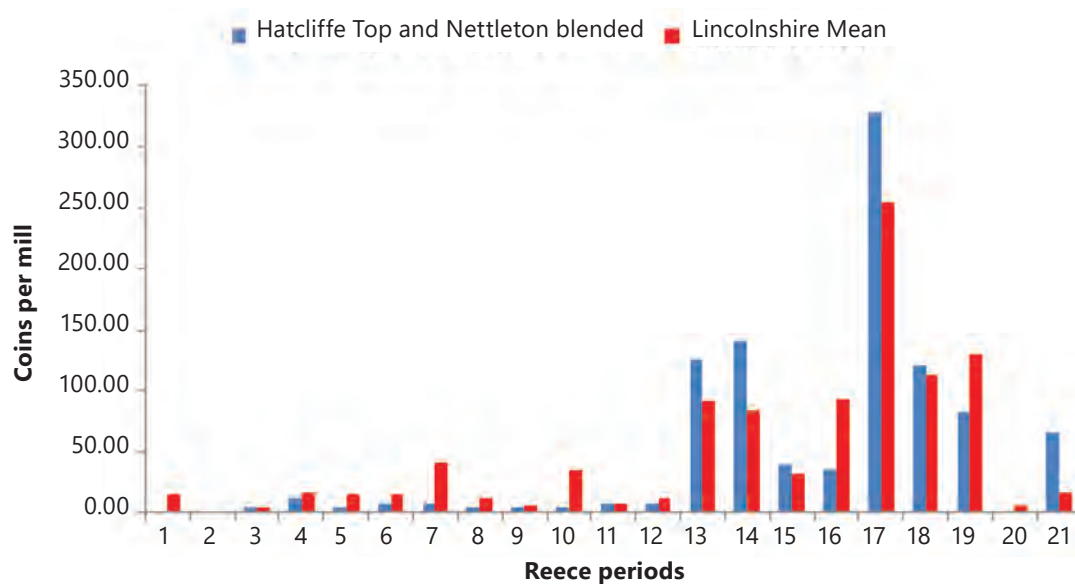


Fig. 7.42
The blended Hatcliffe Top and Nettleton assemblages compared to the Lincolnshire Mean.

Figure 7.38 presents the data for the two sites but for RPs 13 to 21 only (AD 260-402). Compared with Sapperton, the distortional effect of Hatcliffe Top having minimal coin loss in the earlier periods is less acute compared with Old Winteringham given that both of these sites have higher loss in the mid- to late RPs. The profile shows higher loss for RPs 13 and 14 at Old Winteringham and otherwise a fairly close correspondence with the exception of RP 21 (AD 388-402) when the difference in loss is marked.

Comparison to Lincoln blended mean

Figure 7.39 shows the Hatcliffe Top assemblage compared to the blended means of four Lincoln City sites (cf. above). Not surprising given its origins Lincoln shows comparatively marked coin loss in the earlier RPs (RPs 1 to 12 (pre-invasion to AD 260)). The start of increased, but still relatively low loss at Hatcliffe Top occurs through RPs 13 to 16 (AD 260-330), and then higher losses are apparent for the remaining periods, particularly for RP 17 (AD 330-348). Figure 7.40 gives the Hatcliffe Top assemblage compared to the Lincoln sites for RPs 13 to 21 only (AD 260-402). The profile remains largely the same as with the prior histogram.

Comparison with the Nettleton site

Figure 7.41 shows the Hatcliffe Top assemblage compared with the Nettleton assemblage. It is particularly noticeable that the Hatcliffe Top coin loss (apart from the two coins found for RPs 3 to 4 (AD 54-96)) starts much later than the Nettleton

Table 7.10 Coins per mill data of comparators, from Walton's data (Walton 2011). * excluding Richborough.

RP	Walton's British Mean*	Lincolnshire Mean	Lincolnshire Mean, RP 13-21 only
1	8.19	15.39	
2	11.25	1.48	
3	6.27	3.47	
4	34.24	15.88	
5	28.01	15.39	
6	29.94	14.89	
7	40.05	40.71	
8	18.95	11.42	
9	6.2	5.95	
10	15.83	34.26	
11	7.08	7.94	
12	9.83	12.41	
13	137.13	91.36	111.31
14	110.56	83.41	101.63
15	21.98	31.28	38.11
16	42.57	92.85	113.13
17	235.27	255.21	310.95
18	89.11	113.7	138.54
19	110.04	130.08	158.50
20	4.35	6.45	7.86
21	32.02	16.38	19.96
Total	998.87	999.91	999.99
No. of coins	212,497	2,014	1,653

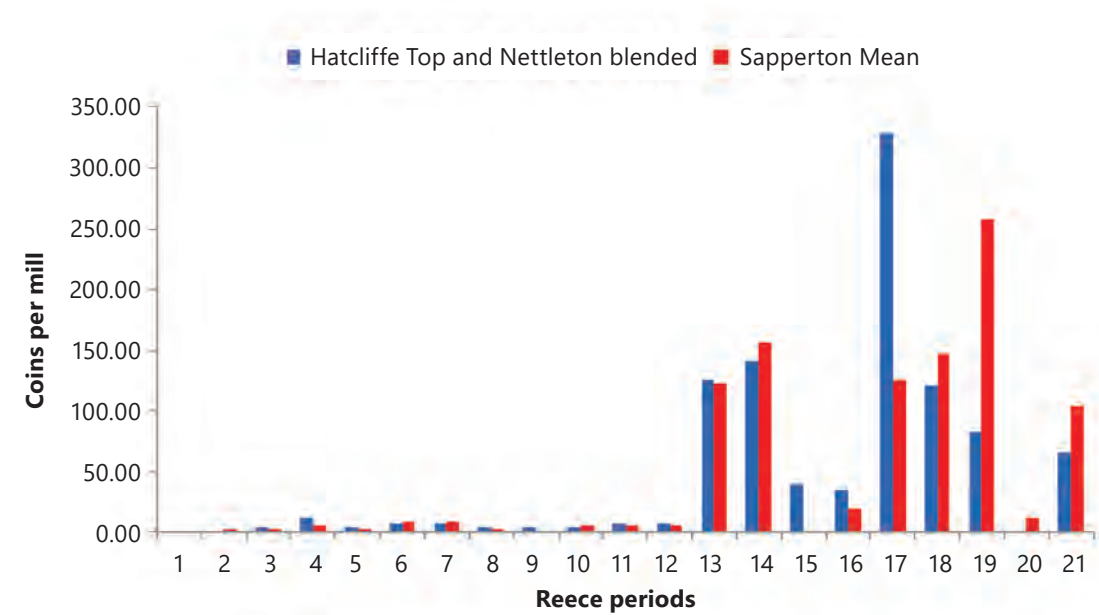


Fig. 7.43
The blended Hatcliffe Top and Nettleton assemblages compared to the Sapperton Mean.

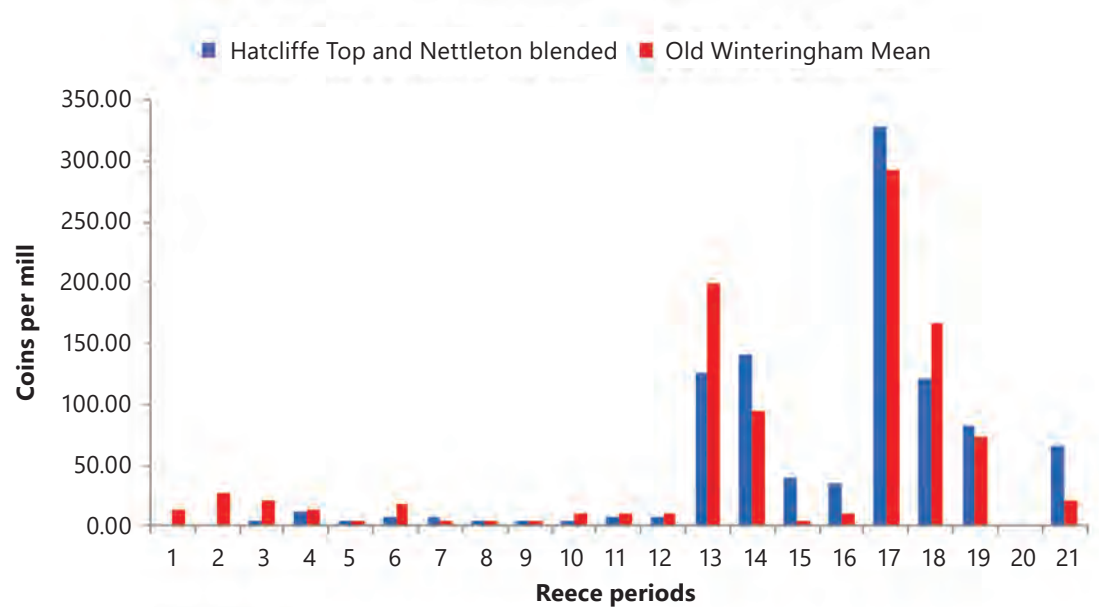


Fig. 7.44
The blended Hatcliffe Top and Nettleton assemblages compared to the Old Winteringham Mean.

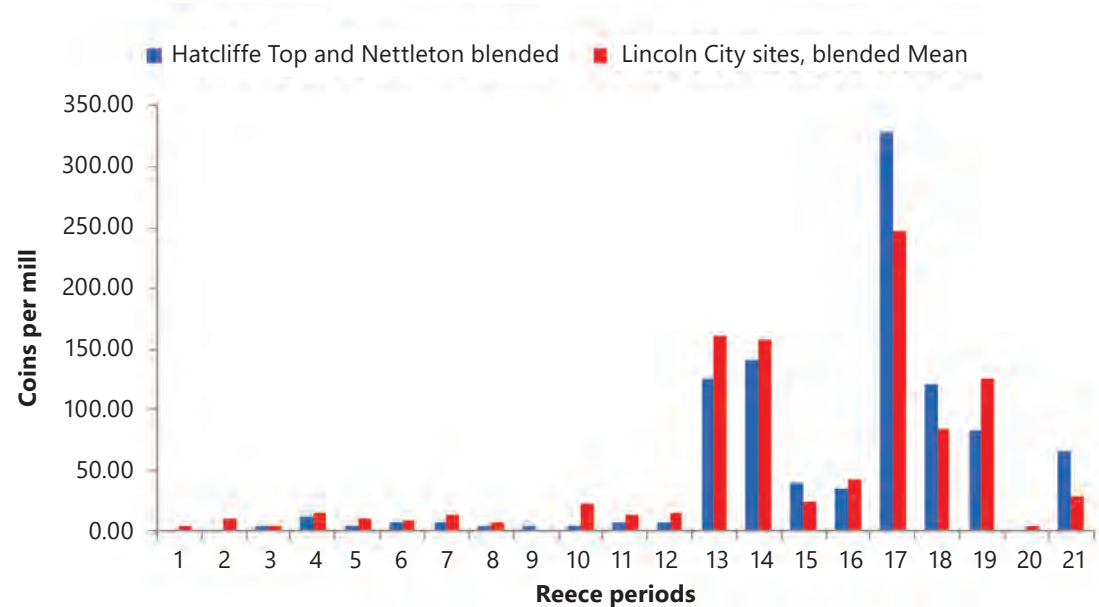


Fig. 7.45
The blended Hatcliffe Top and Nettleton assemblages compared to the Lincoln Mean.

Table 7.11 Coins per mill data of comparators, from Reece's data (Reece 1991).

RP	Lincoln Blended sites 2-5	Lincoln Blended RP 13-21 only	Sapperton	Sapperton RP 13-21 only	Old Winteringham	Old Winteringham, RP 13-21 only
1	3.53		0		13.94	
2	10.67		3.13		27.87	
3	4.94		3.13		20.91	
4	14.25		6.27		13.94	
5	9.94		3.13		3.48	
6	8.68		9.4		17.42	
7	12.97		9.4		3.48	
8	7.44		3.13		3.48	
9	1.66		0		3.48	
10	22.67		6.27		10.45	
11	13.01		6.27		10.45	
12	15.20		6.27		10.45	
13	161.56	186.30	122.26	129.57	198.61	230.77
14	157.71	198.39	156.74	166.11	94.08	109.31
15	24.17	30.21	0	0.00	3.48	4.05
16	42.37	48.34	18.81	19.93	10.45	12.15
17	246.61	280.97	125.39	132.89	292.68	340.08
18	83.59	85.60	147.34	156.15	167.25	194.33
19	126.14	133.94	257.05	272.43	73.17	85.02
20	3.60	4.03	12.54	13.29	0	0.00
21	29.31	32.23	103.45	109.63	20.91	24.29
Total:	999.99	1000	1000	1000	1000	1000
No. of coins	1140	248	319	301	287	247

activity (which starts from RP 4 (AD 69-96). Hatcliffe Top has apparently lower activity than Nettleton during RPs 13 to 16 (AD 260-330), roughly double Nettleton's level of activity in RP 17 (AD 330-348) and substantially higher activity in the remaining RPs. As it is believed that Nettleton may have declined as a settlement from around RP 16 or 17 (AD 317-348) and then ceased, it is intriguing to imagine some form of relationship since the Hatcliffe Top settlement shows such an expansion from this moment.

Comparison of blended Hatcliffe Top and Nettleton assemblages with various Lincolnshire sites

To further explore the idea that Hatcliffe Top and Nettleton may have coin loss patterns that relate to a larger process or are otherwise related a blended coins per mill mean was calculated for the two settlements (Table 7.12). If the settlements effectively represent

some form of re-settlement/re-organization, not necessarily of the same people, it might be expected that its profile match other Lincolnshire settlements that also have profiles covering a long RP history. Figures 7.42 to 7.45 show the blended Hatcliffe Top and Nettleton assemblages compared to the Means for Lincolnshire, Sapperton, Old Winteringham and Lincoln. In general, the blended Hatcliffe Top and Nettleton Mean appears to be a better fit with the Lincolnshire site Means than either of the individual Hatcliffe Top or Nettleton Means and could be a good proxy for a single settlement's profile. While none of the comparators exactly matches the blended Hatcliffe Top and Nettleton Mean, for the earlier to mid- periods (RPs 1 to 12 (pre-invasion to AD 260)), Sapperton appears the best fit, with its apparently similar relatively lower coin loss when compared to the other Means. For the RPs 13 to 16 (AD 260-330), the blended Lincoln sites appear a slightly better match, especially given the relatively higher apparent activity

at both sites during RPs 15 and 16 (AD 296-330). The very high apparent coin loss during RP 17 (AD 330-348) at Hatcliffe Top and Nettleton is echoed by the Old Winteringham Mean and the blended Lincoln Mean. Similarly, the profile for the remaining periods, RPs 18 to 21 (AD 348-402) is echoed in the Old Winteringham and blended Lincoln Means, although the very high RP 21 (AD 388-402) activity at Hatcliffe Top and Nettleton more closely mirrors the pattern at Sapperton.

Discussion

Drawing firm conclusions about a site's activity based on applied numismatic analysis using RP data alone is inadvisable. Other archaeological evidence must be scrutinized and employed to ensure a rounded reliable picture. However, there are some features of the patterns in coin loss at Hatcliffe Top that are instructive. From the coins it seems that whilst some earlier activity is possible (and presuming no aversion to coin use in the earlier Roman period) the settlement would appear to have started around AD 260-75. It then appears to have modest coin loss for the following years up to around AD 317-330. At around that point the coin loss appears to be either higher or similar to that of other Lincolnshire settlements. In turn it could be conjectured that the community flourished from around the mid-fourth century until the end of the Roman era, with particularly noticeable above-expected activity around AD 330-348 and AD 388-402. This leads to the question of what was occurring at Hatcliffe Top to create these very much higher coin loss profiles at these times. The high value in RP 21 (AD 388-402) is similar to the Sapperton profile and dissimilar to the other sites in Lincolnshire and the county Mean. In addition, Sapperton also appears to share the slow start to activity in the early RPs with mid-third century higher activities. While Sapperton is far from Hatcliffe Top they both share roadside locations. Is the activity at Hatcliffe Top, particularly from the mid-Late Roman era till the fifth century similar to Sapperton? Does the higher coin loss at both sites in the final years of the Roman occupation suggest a link to official functions/an

official connection? The decline in coin loss and activity at Nettleton is mirrored by a rise in coin loss activity at Hatcliffe Top and so it is tempting to link the two as elements of one process, perhaps landowner or officially driven. On the other hand this may just be coincidence. Nettleton is on a different road route along and probably across the Wolds from Hatcliffe Top. Analysis of coin loss activity at other sites in the area may show similar dichotomies and should shed light on these matters, if and when such lists become available.

Table 7.12 Coins per mill, Nettleton data and Hatcliffe Top and Nettleton blended.

RP	Nettleton	Hatcliffe Top and Nettleton blended
1	0.00	0.00
2	0.00	0.00
3	0.00	3.91
4	19.23	11.72
5	9.62	3.91
6	19.23	7.81
7	19.23	7.81
8	9.62	3.91
9	9.62	3.91
10	9.62	3.91
11	19.23	7.81
12	19.23	7.81
13	259.62	125.00
14	269.23	140.63
15	76.92	39.06
16	57.69	35.16
17	182.69	328.13
18	9.62	121.09
19	9.62	82.03
20	0.00	0.00
21	0.00	66.41
Total:	1000	1000
No. of coins	104	256

Chapter 8

Palaeoenvironment and Diet at Hatcliffe Top: Environmental Remains, Faunal Remains and Marine Shell

D. James Rackham, John Giorgi and Elizabeth Somerville

8.1 Environmental Archaeology Report

D. James Rackham and John Giorgi

8.1.1 Introduction

During the excavations at Hatcliffe Top a total of thirty two environmental soil samples (Table 8.1) were collected from a series of features ranging in date from mid- to late Roman, with one possible prehistoric feature of unknown date. The site is clearly a farmstead and associated field system that saw intensive activity in the late Roman period. The sampled features included ditches, gullies, a probable threshing floor and 'ovens' associated with corn drying (Table 8.1) and were located in five excavation Trenches, A-E (Fig 4.1). The environmental bulk soil samples were collected for the potential recovery of biological evidence including charred plant remains for information on the agricultural economy (crop husbandry and processing) and human activities at the site. These samples were submitted to the Environmental Archaeology Consultancy for processing, assessment and subsequent post-excavation analysis, except for three which were discarded prior to processing (viewed as likely to be less informative than other samples collected at the ovens from which these samples derived). In addition the assemblage of hand collected animal bone from the excavations was submitted for identification and analysis.

The site is located on a slightly elevated position (40-50m OD) overlooking the valley of the Waithe Beck to the east, which flows down from Hatcliffe to the north of the site to nearby Barnoldby where it turns and runs in a small valley to the south-east. The underlying

geology is Burnham Chalk (with friable soft and hard beds including flint and marl), and flint and chalk occur in varying amounts in the samples. The chalk is capped by glacial till (see Section 1.2.2). Animal bone, charred plant remains, marine shell and terrestrial snails survive in fairly good condition on the site, although the ashy character of a number of samples has led to the poor survival of terrestrial snails in some deposits, but there are no waterlogged remains and the soil conditions are not conducive to the survival of pollen in the deposits.

8.1.2 Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The sample was washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet sieve of 1mm mesh for the residue. The residues were dried and subsequently refloated, to ensure the efficient recovery of charred material. The dry volume of the flots was measured and the volume and weight of the residue recorded. A total of approximately c. 608 litres of soil were processed in this way.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through the residue in order to recover magnetised material such as hammerscale and prill. The flots were studied using x10 magnifications and the presence of environmental finds (i.e. snails, charcoal, carbonised seeds, bones etc.) was noted and their abundance and species diversity recorded on the assessment sheet. These, along with the finds from the sorted residues, constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 8.2 and 8.3. The botanical remains were subsequently studied in detail (Tables 8.4a and 8.4b), as were the terrestrial snails (Table 8.6).

8.1.3 Sample Results

The samples washed down to produce residues ranging in volume between 20 and 15,000 millilitres, and that consist of abundant chalk and various proportions of flint, small quantities of sediment concretions and occasional erratic stone, pebbles and quartz. Archaeological inclusions, including fairly common 'fired earth' or clay and burnt flint and fire-cracked pebbles occur in most samples (Table 8.2), only the >6.5mm fragments of which were sorted and weighed.

The finds recovered from the samples include smallish quantities of pottery (an average of approx. 0.6g of pot per litre of deposit, but only 0.15g/litre if sample 15 is excluded), small quantities of possible flint debitage, a hobnail, a little slag/prill, a very small amount of marine shell, a little animal bone (approx. 0.3g per litre of deposit), a consistent scatter of very low density flakes of hammerstone, a little fuel ash slag (vitrified siliceous material), occasional fragments of brick/tile, coal and fragments possibly of quern stone (Table 8.2). Apart from context (4057) with 285g of pottery, only fired earth and burnt stone occur in any significant quantities (see Table 8.2), and the bulk of this is associated with the sampled deposits in Trench D, where two 'drying ovens' are recorded, and a 'drying' oven flue in Trench C, although a small assemblage of burnt stone in late Roman gully fill (2029) in Trench B suggests deposition of some hearth debris. The fuel ash slag is primarily concentrated in the samples from Trench D, but over 50% of the flots from the lower ashy fill of 'drying' oven flue [3739] in Trench C is fuel ash slag, reinforcing the association of the fuel ash slag with the drying ovens. Much of the fired earth in the Trench D and C samples has surfaces, and its character suggests structural material, quite probably from clay structures forming the ovens. Small quantities of hammerstone are scattered throughout the site, but at an average density of less than 0.2 flakes per litre of deposit and the small quantities of slag or prill the iron smithing that generated this material must be located elsewhere on the site. There are apparently significant differences in the concentration of hammerstone in the trenches with the highest recorded in Trench A at 0.29 flakes/litre and the lowest in Trenches E and C with 0.03 and 0.09 flakes/litre respectively. Trench A is well removed

from the other trenches (see Fig. 4.1) and may perhaps be located closer to any iron smithing area.

Although fragments of animal bone and teeth occur in twenty four of the twenty nine processed samples (Table 8.2), and many small fragments of cattle and sheep size bone were present relatively few of the bones and teeth could be confidently identified to species. The bone fragments were fairly well-preserved but many fragments were small with just four samples producing identifiable sheep or goat bones, two cattle and pig, and one horse. No chicken bones were recorded from the samples, but one eel vertebra was recovered from context (4002) and a single small fish bone from context (5007), while one sample produced a small bird vertebra, one a bird phalanx and one a carpo-metacarpus of the thrush family, all these could have derived from fish and wild song birds utilised for food, although the birds could equally be natural deaths at the site or animals caught by the domestic cats indicated by the hand collected bone. The remaining identified vertebrates reflect the natural wild fauna at the site and include weasel (1 sample), hedgehog (1 sample), common shrew (1), field vole (4), house mouse (2) and frog or toad (12), with unidentified mice, shrew and voles in five, one and two samples respectively. They afford little useful ecological data, although the house mouse would suggest buildings nearby, since this species rarely occurs unassociated with human settlement or agricultural buildings. Identifiable marine shellfish were recorded in ten samples with fragments of oyster most commonly recorded in 9 samples, and cockles and mussels each in one sample. These reflect the only evidence for 'trade' or resource-interaction with the coast and with nine samples producing oyster shell and only four sheep/goat one might suppose shellfish were important, but if we are remote from where most of the domestic food rubbish was deposited this frequency data may not reflect the reality at the site and identifiability also has a major impact. The weight of marine shellfish recovered from all the samples (only fragments caught on the 2mm sieve or above were weighed) was 37 grammes, while the animal bone totalled 189 grammes. Small fragments of shell are much more easily identified than small fragments of animal bone, so these data mainly reflect differences in our ability to identify the material.

The flots, perhaps in contrast to the residues, are generally fairly rich or rich, and this is particularly true for Trench D. It is possible that much of this debris derives from crop processing rather than food preparation (see below), again reflecting the agricultural processing activities in Trenches C and D. The flots are quite small in all Trenches except

D where the abundance of charred cereal debris and associated weed seeds accounts for much of this volume (Table 8.3). The charred plant remains are discussed in detail below.

The flots also include some assemblages of terrestrial snail shells (Table 8.3). The most abundant snail, *Cecilioides acicula*, is a blind burrowing species that can burrow up to a depth of 1.5m and which is almost certainly intrusive in these deposits. The remaining taxa are not abundant except in the two samples from Trench E and their lack of survival or numbers in some of the other samples may reflect the quantity of ash that entered the deposits, the acidic nature of which would have corroded the fragile snail shells more severely than any marine shell or animal bone in the deposits.

Each of the samples also contains uncharred root and straw-like material, often in relatively large amounts, as well as small numbers of uncharred seeds including *Fumaria officinalis* (common fumitory), Chenopodiaceae (goosefoot/orache) and *Stellaria media* (common chickweed). The uncharred plant remains, combined with the consistent presence of *Cecilioides acicula* a burrowing snail, indicate that the deposits have been subject to some degree of bioturbation.

8.2 The Charred Plant Remains

John Giorgi

Introduction

The samples were largely from ditch/gully fills and deposits associated with seven corn-drying ovens; with three samples from sooty layers overlying a possible threshing floor, two from post-hole fills and one from a scoop feature (Table 8.1). All but one of the samples were from Romano-British features, either mid- to late or late Roman in date. One sample was taken from the fill of a possible prehistoric post-hole or a natural solution hollow. Several charred plant items were also hand-collected during the excavation, associated with structural daub (1081), from a late Roman oven flue/s in Trench A.

Sample size ranged from 5l to 43l although most were large, 20 of the 29 samples being greater than 20l. Twenty-eight of the 29 processed samples contained identifiable charred plant remains, only the fill of the feature thought to be either a possible post-hole or natural solution hollow [3532] failing to produce any. The dried flots were divided into different fractions using a stack of sieves for ease of sorting and

the botanical remains identified using a binocular microscope (with a magnification of up to x40) together with modern and charred botanical reference material and reference manuals (Cappers *et al.* 2006; Jacomet 2006).

The flots of six samples, all from late Roman deposits in Trench D, produced very rich charred plant assemblages which required sub-sampling before sorting and quantification; 3.125% of the flots from oven flue fill (4076) and layer (4037); 6.25% from layer (4017); 12.5% from oven flue fill (4070) and stoking/rake-out pit fill (4026); and 25% from layer (4002). The remaining fractions of these flots were completely or partially scanned for additional information. The charred remains were counted with the exception of very fragmented grain (<2mm), cereal coleoptiles, *Avena* (oat) awns and cereal/wild grass culm node fragments; estimated abundance of these items and those in the scanned fractions of the six large flots were made on the basis of the following scoring system: + =1-10; ++ = 11-50; +++ = 51-150; ++++ = 151-250; +++++ = >250 items.

Results

The results are shown by period in Tables 8.4a and 8.4b. Taxonomic order for the wild plants follows Stace (2005), which is also used for habitat and ecological data together with Hanf (1983) and Wilson and King (2003). There were 6,726 quantified charred items in the recorded fractions of the 28 samples (plus several thousand in the scanned fractions) that produced identifiable charred material with cereal remains accounting for the bulk (90%) of these, mainly grains (66%) and some chaff (24%) while charred wild plant/weed seed made up the other 10%. The size of the individual assemblages varied greatly although the bulk of the material was from late Roman deposits in Trench D (4002), (4017), (4026), (4037), (4057), (4070), (4076), and oven flue [3749] in Trench C, together accounting for 78% of the quantified items from the site. Preservation of the charred plant remains was variable but generally poor with a high degree of fragmentation of cereal grains.

The Range of Cereals

Discounting natural fill (3531), cereal grains were present in all 28 samples and chaff fragments in 26. Poor preservation, however, meant that 58% of the counted grains could not be identified while there were large amounts of un-quantifiable small cereal grain fragments (<2mm) in oven fills (3749), (4070),

Table 8.1 Samples taken at Hatcliffe Top for environmental analysis.

Trench	Sample Number	Context	Volume in litres	Weight in kg	Description	Date
A	1	1061	27	31	Fill of Ditch [1062]	Late Roman
A	2	1047	30	33	A fill of Ditch [1048]	Late Roman
A	3	1054	13	15	Layer	Mid-Late Roman
C	4	3004	25	28	A fill of Ditch/Gully [3027]	Late Roman
C	5	3028	25	29	Fill of Ditch [3029]	Late Roman
C	6	3055	20	24.5	A fill of Flue [3050]	Mid-Late Roman
B	7	2017	30	34	A fill of Ditch [2006]	Late Roman
B	8	2029	25	27	Fill of Gully [2030]	Late Roman
D	9	4002	25	27	Sooty layer above ?threshing floor	Late Roman
D	10	4017	26	28	Lower sooty layer above ?threshing floor	Late Roman
D	11	4026	21	23	Lower fill of stoking/rake out pit [4028] associated with flue [4086]	Late Roman
D	12	4037	22	24	Sooty layer above ?threshing floor, on western side of spread	Late Roman
D	13	4048	nd	nd	Not processed - discarded	
D	14	4068	28	30	A fill of Ditch [4075]	Mid-Late Roman
D	15	4057	10	12	Fill at terminal of oven flue [4058]	Late Roman
D	16	4069	nd	nd	Not processed – discarded	
D	17	4070	22	24	Ashy fill of mid-point of oven flue [4058]	Late Roman
D	18	4071	nd	nd	Not processed – discarded	
D	19	4076	23	25	Fill at terminal of oven flue [4086]	Late Roman
C	20	3506	30	36	Lower fill of Ditch [3508]	Late Roman
E	21	5007	30	36	Fill of Ditch [5003] towards the southern end of feature as exposed in Trench E	Late Roman
C	22	3556	30	31	Upper fill of oven flue [3511]/[3515] at eastern end	Mid-Late Roman
E	23	5012	30	33	Lower fill Ditch [5003] towards northern end of feature as exposed in Trench E	Late Roman
C	24	3513	8	8	Lower ashy fill of oven flue [3511]/[3515] towards eastern end of flue	Mid-Late Roman
C	25	3519	12	12	Lower ashy fill of oven flue [3511]/[3515] by SW terminal	Mid-Late Roman
C	26	3531	20	20	Fill of ?post hole/solution hollow [3532]	Prehistoric or Natural
C	27	3749	14.25	15	Lower ashy fill of oven flue [3745] by SE terminal	Late Roman
C	28	3746	12	10	Lower ashy fill of oven flue [3739] by SE terminal	Late Roman
C	29	3742	19.75	21.25	Upper fill of post hole [3761]	Late Roman
C	30	3551	18	23.5	Lower soil and sooty fill of oven structure [3552]	Late Roman
C	31	3757	10	12	Lower ashy fill of oven flue [3759]	Late Roman
C	32	3735	1.9	1.75	Lower ashy fill of scoop feature [3734]	Late Roman

(4076), stoking/rake-out pit fill (4026) and layers (4017) and (4037). A small number of samples also contained a few sprouted grains and loose cereal grain coleoptiles. The identifiable cereal remains were mainly from *Triticum* (wheat) and *Hordeum vulgare* (barley). Wheat was present in all the samples and made up 44% of the identifiable grains and virtually all (99%) of the cereal chaff from the site. The well-preserved wheat grains included evidence for both hulled wheats (*Triticum dicoccum/spelta*) and free-threshing wheats (*Triticum aestivum/turgidum*).

Hulled wheat was the main wheat grain, identified in 27 samples on the basis of grains and spikelet forks, glume bases and rachis fragments. The remains suggest that *Triticum spelta* (spelt) was the dominant hulled wheat, appearing in 22 samples, only a few grains and glume bases in eight samples showing the definite or possible presence of *Triticum dicoccum* (emmer). There were fewer, but still relatively good amounts of, free-threshing wheat grains in 16 samples, mainly represented by occasional remains but including several good-sized assemblages in two late Roman deposits (4057) and (4070). These grains may be from hexaploid and/or tetraploid free-threshing wheats, a few free-threshing rachis fragments in four samples from late Roman deposits (4002), (4017), (4037), (4070) showing the presence of hexaploid free-threshing bread wheat (*Triticum aestivum* see Table 8.4b).

Barley was slightly better represented than wheat in terms of grains, making up 49% of the identifiable grains in 24 samples. The well-preserved remains consisted entirely of hulled barley in 19 samples with twisted grains in 15 showing the presence of six-row hulled barley. There were occasional barley rachis fragments in eight samples with evidence for lax-eared forms of this cereal in late Roman layer (4017) and both dense and lax-eared forms in late Roman oven fill (4076) and layer (4037).

Oats were represented by much smaller numbers of grains (9% of all identifiable grain) in 18 samples; a wild oat floret base was also identified in the scanned fraction of late Roman layer (4037) and small amounts of oat awn fragments in late Roman layers (4017) and (4037). One grain, from a mid-late Roman layer (1054), was tentatively identified as *Secale cereale* (rye). Other potential cereal debris was represented by a few charred large culm node/internode fragments, possibly cereal straw, in four samples from late Roman oven flue fills (4070), (4076), layer (4037) and stoking/rake-out pit fill (4026) although these stem fragments could also be from wild grasses.

Current archaeobotanical research shows that this range of cereals is typical for the Romano-British period, spelt wheat and hulled barley usually being the main grains with occasional finds of emmer and free-threshing wheat (Greig 1991, 309). Other Romano-British sites in North Lincolnshire and the wider region have produced similar results. At two sites to the west of Hatcliffe Top, spelt was the main crop, specifically in excavations close-by at Mount Pleasant, Nettleton (Smith 2004; Giorgi and Smith 2013) and in Romano-British deposits at Scunthorpe (Giorgi 2014). Further afield, but likewise in the eastern region, at Caistor by Norwich, Norfolk, hulled barley and hulled wheat (including spelt) were the most common cereals (Giorgi 2011).

There was very little evidence, however, for free-threshing (including hexaploid) wheat at these other sites, this cereal rarely being well-represented in Romano-British deposits although there are a few exceptions, one being good amounts found at Barton Court Farm, Abingdon (Jones 1986). It is possible that the free-threshing wheat grains could represent intrusive material from overlying Saxon deposits, recent research involving C14 dating of such grains showing many to be intrusive in Roman contexts, particularly on multi-period sites with low densities of remains (Carruthers *et al.* 2015, 88; Carruthers 2014, 104). On the other hand, the two good assemblages of free-threshing wheat grains at Hatcliffe Top, in the late Roman fills of corn-drying oven [4062]/[4058], were well-sealed by a thick clay layer and other later Roman deposits with no evidence to suggest Saxon activity close-by. Bread wheat has a high yield potential but requires greater soil fertility than other wheats and being a naked grain is more susceptible to attack by birds and fungi, therefore its cultivation demands a greater input in terms of human resources (Jones 1981, 107).

It is difficult to establish whether the oats were cultivated and/or simply weeds on the basis of grain morphology alone. The oat grains, however, were only very minor components of the cereal assemblages with only occasional oat grains in individual samples, even the largest number of oats from late Roman deposit (4057) accounting for just 10% of the quantified grains. Therefore, it is likely that the oat grains from the site are cereal weeds along with other similar sized large wild grass seeds in the samples such as *Bromus* (brome). The one oat floret in the samples also showed the presence of wild oat. It is also unlikely that emmer was deliberately cultivated, the few remains probably surviving as remnants of past crops, while the rye grain is also probably a cereal weed.

Table 8.2 Finds from the processed samples collected at Hatcliffe Top.

[illegible]

Table 8.2 Finds from the processed samples collected at Hatcliffe Top (continued).

Trench	Sample	Context	Date	Sample vol. (l)	Residue vol. (ml)	Pot no/wt (g)	Flint no/wt (g)	Fe no.	Coal wt (g)	Fired earth/daub wt (g)	Slag/prill *	Magnetic wt (g)	h'merscale no.	Burnt stone wt (g)	Marine shell	Bone wt (g)	Comments
C	27	3749	Late Roman	14.25	550	13/13	6/0.4			11		1.4	2fl			2	Natural flint flakes; tile 0.5g; a little fuel ash slag in flot
C	28	3746	Late Roman	12	500	4/1	6/1.6		+	86		1.2	1fl	21.2		0.6	Fired earth- includes possible structural material; natural flint flakes; over 50% of flot is fuel ash slag; coal
C	29	3742	Late Roman	19.75	1400	8/5	9/1.8		2	8.4		0.8	6fl	23	0.1	4	Natural flint flakes; lots of coal in flot
C	30	3551	Late Roman	18	700	13/15			+	73		1	1fl	10.4		2.2	Fired earth probably structural material; a little coal and fuel ash slag in flot
C	31	3757	Late Roman	10	800		3/0.2		+	483		1.4	1fl			0.6	Natural flint flakes; fired earth – possibly structural; coal
C	32	3735	Late Roman	1.9	20		1/0.1										Natural flint flakes

+ = present; * frequency 1=1-10; 2=11-50; 3=51-150; 4=151-250; 5=>250; £/# - no sherds/weight in g.

Table 8.3 Environmental finds from the processed samples from Hatcliffe Top arranged by Trench.

Trench	Sample	Context	Sample vol. (l)	Flot vol. (ml)	Charcoal */*	Charred grain*	Charred chaff*	Charred seed*	Marine shell wt (g)	Snails */#	Summary identifications
A	1	1061	27	14	3/5	3	2	1		2/1	Emmer/spelt, barley (incl. hulled & lateral grains) grains, wheat chaff, goosefoot, dock, heath-grass & small indet. Grasses; sheep/goat, cattle, house mouse, vole, shrew, frog/toad; snails - <i>Cecilioides acicula</i>
A	2	1047	30	9	3/5	2	3	2	24	2/1	Emmer/spelt, barley (hulled), oat grains, wheat chaff (incl. spelt-type glume bases), goosefoot, dock, legume cotyledons, ribwort plantain, ?knapweed, stinking chamomile, sedges, heath-grass, small indet. grasses & a few other NFI taxa; oyster, horse, rodent, frog/toad; snails - <i>Cecilioides acicula</i>
A	3	1054	13	38	5/5	3	3	3	<1	1/1	Emmer/spelt, barley, cf oat grains, wheat chaff (incl. spelt-type glume bases), goosefoot/orache, vetch/vetchling, small leguminous seeds, sedges, heath-grass, small indet. grasses & a few other indet./NFI taxa; oyster; indet. mammal bone, small bird; snails – see Table 8.6
B	7	2017	30	10	3/5	2	2	2	<1	5/1	Wheat, barley grain, spelt wheat chaff, mallow, dock, small leguminous seed, sedge, heath-grass; cattle, sheep/goat, rodent, frog/toad; oyster; snails – <i>C. acicula</i> , <i>V. excentrica</i> , <i>T. hispida</i>
B	8	2029	25	6	2/4	3	2	2		1/1	Emmer, barley grain, wheat chaff, legume, heathgrass; indet bone, one burnt; snails – <i>Cecilioides acicula</i> , <i>Trichia hispida</i>
C	4	3004	25	13	3/5	3	1	2	8.5	3/2	Barley (hulled), wheat, oat, wheat chaff, goosefoot, vetch/vetchling, sedge, heath-grass, small indet. grasses, onion couch; oyster and fragment of cockle; sheep/goat, vole; snails – see Table 8.6
C	5	3028	25	c.11	3/5	2	2	1	<1	2/1	Barley, wheat (incl. spelt wheat-type), wheat chaff, small leguminous seed, bedstraw; indet. mammal; oyster; snails – see Table 8.6
C	6	3055	20	c.8.5	3/5	3	2	2		4/1	Barley (incl. hulled & lateral grains), wheat (incl. ?spelt and emmer/spelt-type), wheat chaff (incl. ?spelt-type), goosefoot/orache, dock, small leguminous seed, heath-grass, grasses & a few NFI taxa; sheep/goat, rodent; snails – see Table 8.6

Table 8.3 Environmental finds from the processed samples from Hatcliffe Top arranged by Trench (continued).

Trench	Sample	Context	Sample vol. (l)	Flot vol. (ml)	Charcoal */*	Charred grain*	Charred chaff*	Charred seed*	Marine shell wt (g)	Snails */#	Summary identifications
C	20	3506	30	2	2/2	2	1	1	1.2	2/1	cf emmer, cf barley grain, wheat chaff, legume; sheep size, indet. frog/toad; oyster; snails – see Table 8.6
C	22	3556	30	4	1/2	3	1	2		1/1	Emmer/spelt, barley, oat grain, wheat chaff, dock, grasses; pig, indet. bone; snail – <i>Cecilioides acicula</i>
C	24	3513	8	2	1/2	1	2	1		3/2	Wheat, oat grains, emmer chaff, goosefoot, dock; snails – see Table 8.6
C	25	3519	12	4	1/2	3	1	2		2/1	Emmer spelt, barley, oat grains, wheat chaff, goosefoot, dock; snails – see Table 8.6
C	26	3531	20	1	1/1					2/1	Snails – see Table 8.6
C	27	3749	14.25	12	1/2	5	4	4		3/1	Emmer/spelt, barley, oat grains, spelt chaff, goosefoot, dock, legume; indet. bone, some burnt; Snails – see Table 8.6
C	28	3746	12	8	1/2	2	1	2		-	Wheat, barley grains, wheat chaff, dock, legume; sheep size, indet bone-all burnt
C	29	3742	19.75	5	1/2	2	1	1	0.1	1/1	Emmer/spelt, cf rye, cf oat grains; sheep size, indet burnt, rodent, frog/toad; oyster; snails – <i>Cecilioides acicula</i>
C	30	3551	18	10	1/2	2	1	2		-	Emmer, barley, cf oat grains, spelt chaff, legume, <i>Danthonia</i> ; indet. bone
C	31	3757	10	30	3/5	2		1		-	Emmer/spelt grain, legume; indet. bone- mostly burnt
C	32	3735	1.9	12	3/5	1				-	cf wheat, barley grains
D	9	4002	25	293	2/5	5	5	3		2/1	Emmer/spelt, free threshing wheat, barley grains, spelt chaff, dock, legume, brome; indet. bone, mouse, hedgehog, eel, frog/toad; snails – <i>Cecilioides acicula</i>
D	10	4017	26	180	2/5	5	5	4	1	3/2	Emmer, free threshing wheat, barley, oat grains, spelt chaff, goosefoots, docks, brome, grasses; pig, cattle size, sheep size, mouse, field vole, frog/toad, fish bones; oyster; snails – see Table 8.6
D	11	4026	21	170	2/5	5	3	4	2	4/1	Emmer/spelt, barley, oat grains, spelt chaff; indet. bone, some burnt, house mouse, rodent, frog/toad; several tiny fish bones, burnt mussel shell; snails – see Table 8.6
D	12	4037	22	275	4/5	5	5	5	0.2	4/1	Emmer/spelt, free threshing wheat, barley, oat grains, spelt chaff, goosefoot, dock, brome, grasses; hazelnut; indet. bone, mouse, field vole; oyster; snails - see Table 8.6
D	14	4068	28	2.25	2/5	2	2	2		3/2	Spelt, cf emmer, barley; field vole, mouse, thrush family; snails – see Table 8.6
D	15	4057	10	25	1/2	5	2	2		3/2	Emmer/spelt, free threshing wheat, barley, oat grains, spelt chaff, goosefoot, brome; indet. bone, rodent; snails – see Table 8.6
D	17	4070	22	112	2/3	5	5	4		3/1	Emmer/spelt, free threshing wheat, barley grains, spelt chaff, brome, grasses; Abundant mineralised chaff; frog/toad; snails – see Table 8.6; flot all crop waste!
D	19	4076	23	1335	3/5	5	4	3			cf emmer, emmer/spelt, barley, oat grains, spelt chaff, goosefoot, dock, wild radish, brome; sheep size, indet. bone-most burnt, frog/toad, burnt frog/toad; fish bones
E	21	5007	30	19	1/2	1	1			5/3	Emmer/spelt, cf barley, uncharred, hazelnut; Field vole, common shrew, frog/toad, small fish; snails – see Table 8.6
E	23	5012	30	6	1/2	1	2	1		4/3	cf emmer/spelt, wheat; indet. bone-burnt, mouse, weasel, bird, frog/toad; snails – see Table 8.6

* frequency 1=1-10; 2=11-50; 3=51-150; 4=151-250; 5=>250; */* frequency of charcoal >2mm/<2mm; est. – estimated abundance scores; */# - frequency/species diversity, 0=0, 1=1-3, 2=4-10, 3=11-25, 4=26-50, 5=>50 species/types etc.; NFI – not formally identified.

The Cereals by Phase

Six of the 28 samples containing charred plant remains, including cereal remains (grains, chaff, etc.) were from middle to late Roman deposits, with the remaining twenty two deposits being of late Roman date. Together the middle to late Roman samples account for c. 9% of the charred plant remains from the site, with c. 91% coming from the late Roman deposits. Thus, the main phase of agricultural activity within the excavated trenches at the site was in the later Roman period (some 90% of the excavated features and deposits overall estimated to date to after AD 330) and this may have extended into the 5th century AD.

This prevents any significant comparisons in the range of cereals between different phases of Romano-British occupation at the site. The results do show, however, that spelt wheat and hulled barley were the main cereals at the site including in the middle to late Roman samples. Good amounts of free-threshing (including bread) wheat grains only appear in several late Roman samples, notably in corn dryer [4062]/[4058].

The uses of the cereals

The cereals at the site may have been used for bread, porridge or added to stews or soups (Renfrew 1985, 22). Spelt and bread wheat both produce well risen loaves unlike barley which, however, makes good griddle cakes (Cool 2006, 70-1). One popular Roman dish was a gruel made from spelt wheat or barley called *puls* or *pulmentus*, similar to Italian polenta (Renfrew 1985, 22). Barley may have also been used as animal fodder.

Barley and spelt wheat were also used in brewing which may be indicated by the presence of sprouted grains. Small numbers of germinated hulled wheat (including spelt) grains were found in late Roman oven fill (3749) and late Roman layers (4002) and (4017) with occasional and small numbers of loose coleoptiles in six samples. These few remains, however, cannot be taken as definite evidence for brewing on site and are more likely to be the result of the accidental sprouting of grains in damp storage conditions.

Other potential food/economic plants

The presence of *Linum usitatissimum* (flax) was shown by a single seed recovered by hand collection from (1081) within a late Roman oven flue in Trench A. Flax seeds may have been used as food and the fibres

of the plant for linen, and they are a common find on Romano-British sites (Greig 1991, 309) but with just one seed recovered no further comments can be made.

There were occasional and very small numbers of charred legume seeds in 17 samples although none were identifiable to species and at best only broadly classified as *Vicia/Lathyrus* (vetch/tare/vetchling) or *Vicia/Lathyrus/Pisum* (vetch/tare/vetchling/pea). Thus, it was not possible to establish which, if any, of these remains were from cultivated and/or wild legumes although the smaller seeds (<2mm) may tentatively be from weeds and the larger legumes and fragments (>2mm) (in 11 samples) possibly from cultivated pulses. The small amounts, however, in predominantly cereal grain assemblages suggest that they are likely to be weeds possibly including relics of cultivated pulses from previous use of the same fields. There was a single charred seed of *Sambucus* (elder) in middle to late Roman oven fill (3513) which may be from the gathering of wild food for consumption. A single seed of *Papaver somniferum* (opium poppy) was found in a late Roman fill (4026); this was a common flavouring during the Roman period although it probably represents a cereal weed in this instance being found in a large grain assemblage.

Crop husbandry

There is a good range of wild plant/weed seeds, most of which probably represent arable weeds given their presence in cereal assemblages, although relatively few were identifiable to species therefore limiting their potential ecological information. The identifiable weeds, however, provide an indication of the range of soils being cultivated at the time, many of which suggest the use of the calcareous soils in the area. *Anthemis cotula* (stinking chamomile) and *Galium aparine* (cleaver) may reflect the use of the heavy loamy and clayey soils on which the site lies with *Carex* (sedges) and *Eleocharis* (spike-rushes) indicative of damper areas within these fields. *Sherardia arvensis* (field madder) may tentatively point to the use of the free-draining calcareous loamy soils of the Wolds to the south west of the site. The main cereals in the samples, spelt wheat, free-threshing (bread) wheat and barley, may have been cultivated in both the light and heavy soils around the site although barley does not grow well in areas where the drainage is very poor and therefore may have been better suited to the free-draining soils of the Wolds to the west and south-west of the site while bread wheat would have grown best on the

heavier soils around the site. There is little scope for investigating potential changes in the range of cereal weeds (and possibly areas of cultivation) over time given that the charred seeds were from middle to later Roman samples although *Anthemis cotula*, associated with heavier soils, does appear in both middle and late Roman samples.

Tilling of the soil by ard may be suggested by the presence of the perennial weed heath grass (*Danthonia decumbens*) found in early and late Roman cereal assemblages at the site. Today this plant is found in pastures, heathy grassland and moorland including chalky and limestone grassland (similar to the Wolds), but in the past has been found in charred cereal grain assemblages, suggesting that at one time it may have been a common cereal weed, only being eradicated by more efficient ploughing (Hillman 1981, 146).

Several of the weeds represented in the samples, *Fumaria* (fumitories), *Fallopia convolvulus* (black bindweed), *Raphanus raphanistrum* (wild radish), as well as *Chenopodietea* (goosefoot family - well-represented in the samples), mostly germinate in spring and therefore may be indicative of spring-sown crops whereas *Galium aparine* is commonly associated with autumn-sown cereals. The crops identified in the samples may have been sown in either period, although spelt and free-threshing wheat are frost hardy and therefore better suited to winter sowing, most wheats producing more grain when sown in autumn rather than spring, whereas barley would have been well-suited to spring sowing because it has a short growing season.

A few of the weeds identified in the samples may provide some indication of the methods used for harvesting the crops; for example the presence of free standing low-growing weeds in the samples including *Anthemis cotula* and *Sherardia arvensis*, may tentatively suggest reaping of cereals by cutting fairly low on the straw. Roman agronomists describe a range of harvesting methods, possibly also used in Britain, including cutting the straw at different heights and uprooting (Spurr 1986, 67-8). There is little evidence, however, for harvesting by uprooting, just four samples containing charred root and tuber fragments (including *Arrhenatherum elatius* var *bulbosus* (onion couch) in late Roman gully fill (3004)); only late Roman oven fill (3551) contained more than just occasional root/tuber fragments. There is the possibility however that these remains could be from the collection of grassland vegetation for various uses on site including fuel.

Crop processing activities

Tables 8.5 and Fig. 8.1 show the proportions of grains, chaff fragments and weed seeds in the 14 richest assemblages containing over 100 items from the site; cereal grains and chaff make up the majority (between 59% and 99%) of the remains in all the rich assemblages, grains (27% to 98%) dominating in ten and chaff fragments (1% to 59%) in four. Other remains (wild plant/weed seeds) make up between 1% and 41% of the material in the rich assemblages but mostly occur in only small amounts (Table 8.4).

The dominance of cereal debris suggests that the bulk of the remains largely derive from almost fully cleaned grain, accidentally burnt during drying before storage or milling, in food preparation, and also in the case of hulled wheats as part of the process to facilitate de-husking hulled wheats, which usually took place immediately before use, often stored as spikelets in areas with wet summers to limit spoilage by germination or insect attack (Hillman 1981). The hulled wheat chaff may have been accidentally charred during this process and/or subsequently burnt through its use as fuel.

There were both large and small weed seeds in the samples. The large weed seeds were mainly from wild grasses, particularly *Bromus* and probably *Avena*, as well as *Raphanus raphanistrum*, *Fallopia convolvulus*, *Galium aparine* and large-seeded legumes. Exclusively large weed seeds are indicative of almost fully processed cereals because of the difficulty of separating these remains from similar sized grains other than by hand-sorting, a process carried out during the final stages of crop-cleaning. Smaller weed seeds, particularly from *Atriplex/Chenopodium* (orache/goosefoot), *Rumex* (dock), *Danthonia decumbens*, other small-seeded wild grasses and small-seeded legumes including *Medicago/Trifolium* (medick/clover) would have also been largely removed during the latter stages of crop-processing through the use of the 'wheat' sieve, the weed seeds then potentially being used as fuel.

The nature of crop-processing and other activities across the site including the potential function(s) of the crop-drying ovens will be examined on the basis of the individual assemblages in the following discussion.

Table 8.4a Charred plant remains by period: Mid-Late Roman and Late Roman (continued).

[illegible]

Item frequency: + =1-10; ++ = 11-50; +++ = 51-150; ++++ =151-250; +++++=250+ items.

Table 8.4a Charred plant remains by period: Mid-Late Roman and Late Roman (continued).

	Period	M-LR	M-LR	M-LR	M-LR	M-LR	M-LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR
Trench	Trench	A	C	Oven flue	C	Oven flue	D	A	A	C	C	C	C	C	C	E	E
	Feature	Layer	Oven flue	Oven flue	Oven flue	Oven flue	Ditch	Ditch	Ditch	Ph	Scoop	Oven flue	Oven flue	Oven flue	Oven flue	Ditch	Ditch
	Feature number		3050	3515	3515	3515	4075	1062	1048	3761	3734	3552	3745	3739	3759	5003	5003
	Context number	1054	3055	3556	3513	3519	4068	1061	1047	3742	3735	3551	3749	3746	3757	5007	5012
	Sample number	3	6	22	24	25	14	1	2	29	32	30	27	28	31	21	23
	Sample vol (l)	13	20	30	8	12	28	27	30	8	16	11	21	5	43	30	30
	% of flot sorted & quantified	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
LATIN NAME	ENGLISH																
Eleocharis palustris/uniglumis	spike-rush																
Carex spp.	sedges			1					1					1			
Cyperaceae indet.		1		2					1								
Lolium/Festuca spp.	rye-grass/fescue	2															
cf. Poa sp.	?meadow grass													1			
Arrhenatherum elatius var bulbosus	onion couch tubers																
Avena/Bromus sp.	oat/brome													1			
Avena fatua L.	wild oat floret base																
Bromus sp(p).	brome					1			2								
cf. Bromus sp(p).	?brome																
Danthonia decumbens (L.) DC	heath grass	21	4	2			2	4	4	2		7	2	1			2
Poaceae indet.	grasses (large grass florets)												1				
Poaceae indet.	grasses (large seeds)		3	2			4										
Poaceae indet.	grasses (small seeds)	21	1	5	1	1							2				
Poaceae/Cerealia indet.	wild grass/cereal culms																
indeterminate	tuber & rhizome fragments											37					
indeterminate	thin stem fragments																
TOTAL		189	76	175	24	75	68	121	108	34	2	85	929	35	20	11	24
item density (per litre of soil)		14.5	3.8	5.8	3	6.3	2.4	4.5	3.6	4.3	0.1	7.7	44.2	7	0.5	0.4	0.8

tem frequency: + =1-10; ++ = 11-50; +++ = 51-150; ++++ =151-250; +++++=250+ items.

Table 8.4b Charred plant remains by period: Late Roman (continued).

[illegible]

H-C = hand-collected sample.

Table 8.4b Charred plant remains by period: Late Roman (continued).

Period	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR	LR
Trench																								
Feature																								
Feature number																								
Context number																								
Sample number																								
Sample vol (l)																								
% of flot sorted & quantified																								
% of flot scanned																								
LATIN NAME																								
<i>Malva sp.</i>																								
<i>Brassica sp.</i>																								
<i>Raphanus raphanistrum</i> L.																								
<i>Vicia/Lathyrus sp(p).</i>																								
<i>Vicia/Lathyrus sp(p).</i>																								
<i>Vicia/Lathyrus/Pisum sp(p).</i>																								
<i>Vicia/Lathyrus/Pisum sp(p).</i>																								
<i>Medicago/Trifolium spp.</i>																								
Fabaceae indet.																								
Fabaceae indet.																								
<i>Linum usitatissimum</i> L.																								
<i>Plantago lanceolata</i> L.																								
<i>Euphrasia/Odontites spp.</i>																								
<i>Sherardia arvensis</i> L.																								
<i>Galium aparine</i> L.																								
<i>Galium sp.</i>																								
<i>Sambucus sp.</i>																								

H-C = hand-collected sample.

Table 8.4b Charred plant remains by period: Late Roman (continued).

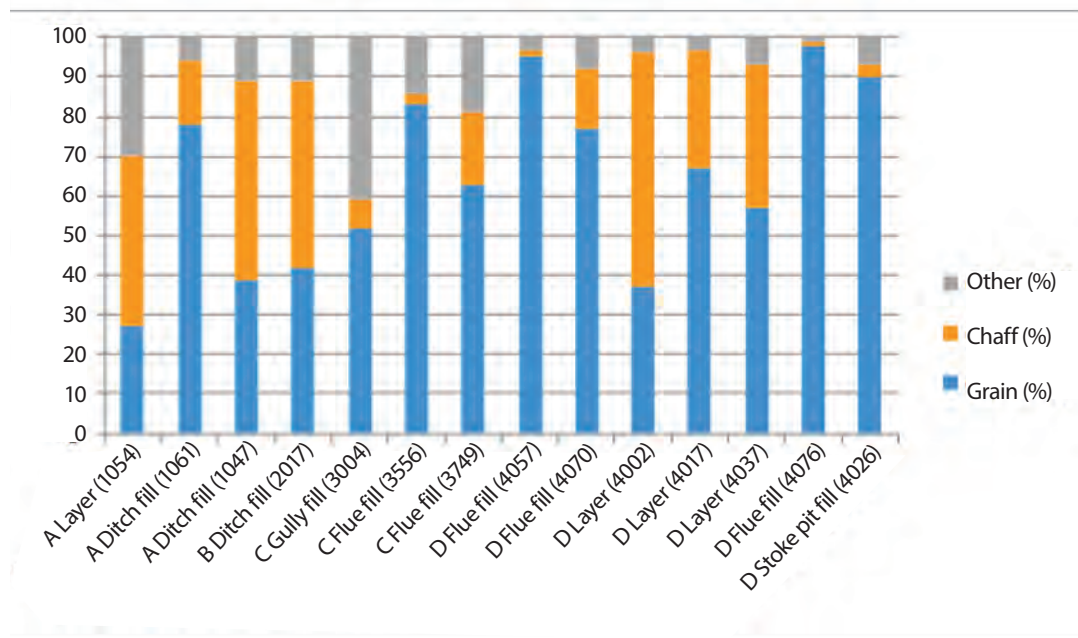
[illegible]

H-C = hand-collected sample.

Table 8.5 The composition of the charred plant assemblages with >100 items.

Phase	Trench	Context	Nos items	Nos (%) of grains	Nos (%) chaff	Nos (%) other plants	Item density*
M-L ROM	A	Layer (1054)	189	52 (27)	81 (43)	56 (30)	14.5
L ROM	A	Ditch fill (1061)	121	95 (78)	19 (16)	7 (6)	4.5
L ROM	A	Ditch fill (1047)	108	42 (39)	54 (50)	12 (11)	3.6
L ROM	B	Ditch fill (2017)	103	43 (42)	48 (47)	12 (11)	3.4
M-L ROM	C	Flue fill (3556)	175	145 (83)	6 (3)	24 (14)	5.8
L ROM	C	Flue fill (3749)	929	585 (63)	169 (18)	175 (19)	44.2
L ROM	C	Gully fill (3004)	135	71 (52)	9 (7)	55 (41)	5.4
L ROM	D	Flue fill (4057)	677	643 (95)	12 (2)	22 (3)	67.7
L ROM	D	Flue fill (4070)	341	263 (77)	51 (15)	27 (8)	124 e
L ROM	D	Layer (4002)	1393	511 (37)	821 (59)	61 (4)	223 e
L ROM	D	Layer (4017)	425	283 (67)	129 (30)	13 (3)	262 e
L ROM	D	Layer (4037)	309	176 (57)	112 (36)	21 (7)	454 e
L ROM	D	Flue fill (4076)	746	733 (98)	9 (1)	4 (1)	1038 e
L ROM	D	Flue fill (4026)	423	380 (90)	14 (3)	29 (7)	161 e

(Key: * per litre of processed soil; e = estimated density based on a sub-sample).

**Fig. 8.1** Proportions of grains, chaff fragments and weed seeds in charred plant assemblages with >100 items.

Discussion of the charred plants by trench

The samples containing charred plant remains were from five Trenches (A to E) across the site, largely from Trenches C (13 samples) and D (eight) with three samples from Trench A and two apiece from Trenches B and E. The spatial relationship of the trenches to one another is illustrated in Fig. 4.1.

Trench A

Three samples from the eastern end of Trench A, from a mid-late Roman gully fill layer (1054) and two late Roman ditch fills (1047), (1061), produced fairly good amounts (>100 items) of charred plant remains, the richest assemblage and highest density of remains (14.5 items per litre of processed soil) being in the gully fill sample.

The three samples produced mainly cereal remains, with evidence for hulled (spelt) wheat and (hulled) barley and possible traces of free-threshing wheat along with fewer wild plant/weed seeds mainly from wild grasses and particularly small-seeded species (Table 8.4a). There were differences between the three assemblages; the mid-late Roman gully fill (1054) contained a greater amount of crop-processing debris consisting of hulled wheat chaff (43%) and weed seeds (30%), whereas there were larger amounts of cereal debris in the two samples from late Roman ditch fills (1047) and (1061); mainly grains (78%) in (1061) and largely hulled wheat chaff (50%) in (1047).

These remains point to small-scale domestic activities associated with the final stages of crop-processing and food preparation, possibly taking place close to the sampled features; weed seeds from the fine-sieving of grains and chaff from de-husking of hulled wheat in the mid-late Roman gully fill layer (1054) and also in the late Roman ditch fill (1047); and grains accidentally burnt during drying before milling/storage and/or from accidents during cooking in the later Roman ditch fill (1061).

The one flax seed and a few grains (Table 8.4b) were recovered by hand-collection from this Trench, from the fill (1081) within a late Roman oven flue/s.

Trench B

The two samples from the western end of Trench B, from the late Roman contexts, ditch fill (2017) and gully fill (2029), also contained fairly good amounts (c. 100 items) of charred plant remains although with low item densities of 3.4 and 3.8 per litre.

These remains consisted largely of cereal debris (83% and 89% of the quantified items in each sample) mainly from hulled (spelt) wheat and (hulled) barley with only traces of possibly emmer and free-threshing wheat; grains were dominant (57%) in gully fill (2029) and hulled wheat chaff (47%) dominant in ditch fill (2017), both containing very few wild plant/weed seeds, mostly from wild grasses and particularly small-seeded species. These remains are indicative of activities mainly associated with the de-husking of hulled wheats and possibly the drying of grains before milling/storage and food preparation.

Trench C

Thirteen middle to late and late Roman samples from this area contained charred plant remains. The bulk of the material was from six samples collected during the 2014 excavations and four in 2010, mainly from the south-western end of Trench C (Figs 4.8, 4.11, 4.13, 4.14, 4.17); from five corn-drying ovens, a post-hole, a ditch and pit fill. The other three productive samples were from gully and ditch fills plus a further flue, taken during earlier investigations in this trench in 2008. The quantities of charred material in most of the individual assemblages was not great, ten of the 13 samples producing less than 100 items and low item densities with the exception of a rich charred plant assemblage from oven flue fill (3749) (Tables 8.4a and 8.4b). The results from the various samples were broadly similar, the assemblages mainly consisting of cereal debris (grains and some chaff) largely from hulled (spelt) wheat and (hulled) barley, with a few free-threshing wheat grains in four samples. Traces of emmer in three samples and occasional and small numbers of oats in eight are probably weeds.

North-eastern end of Trench C

Late Roman Ditch fill (3028): this sample from the eastern end of Trench C produced modest amounts of material of mainly grains, which made up c. 76% of the quantified remains from the sample, together with smaller amounts of chaff and wild plant/weed seeds, debris largely from the final stages of crop cleaning and food preparation, possibly from domestic hearths close-by. The composition was not dissimilar from that of the sample to the west, from (3055).

Late Roman Gully fill (3004): this sample, likewise from the eastern half of Trench C contained a fairly good-sized charred plant assemblage, consisting of cereal grains (52%), a little chaff (7%) and a

good number of wild plant/weed seeds (41% of the quantified remains) including many small weed seeds, a fine-sieving by-product from the later stages of crop-processing possibly used as fuel for nearby hearths.

South western end of Trench C

Middle/Late Roman Corn-Drying Ovens, Trench C

The bulk of the charred plant remains from this trench were from nine samples associated with six ovens/corn-drying ovens in the south-western area of the trench. Three were from the Phase 1 (of this area) oven [3515] with another from the Phase 1 flue [3050] and the others were associated with four other ovens from Phase 3 (of this area), namely fill (3551) of oven [3552], and the fills of flues [3745], [3739] and [3759].

Research on archaeobotanical remains from Romano-British corn driers suggests that these structures were multi-functional, uses including the drying of whole cereal ears, the parching of hulled wheat spikelets to facilitate de-husking, the drying of fully processed grain before storage and/or milling, and the roasting of sprouted grains to halt the germination process for the production of malt for brewing; these different activities may be reflected in the composition of the charred plant assemblages within these features (van der Veen 1989). The charred plant remains in the oven samples reflect the final use and/or backfilling of these features, although the same oven may have been used for different activities over time which can lead to the mixing of residues, making it difficult to distinguish specific functions. This is further compounded in the case of the Hatcliffe Top oven samples by the generally poor preservation and fragmentation of the charred material which may have affected the relative survival of more fragile plant material such as cereal chaff.

Phase 1

Oven flue [3515], fills (3513), (3519) and top fill (3556): ashy fill (3513) from the base of the feature through the middle area of the flue contained very little charred plant material, mainly hulled wheat chaff and a few grains and wild plant/weed seeds, probably spent fuel from the oven as this was essentially the 'fire box' area. The other two samples, from (3556), probably representing episode/s of 'raking out', and (3519) at the south-western end of the flue, both produced fairly good-sized, and very similar, assemblages of mainly grains (83%) with some wild plant/weed seeds (14%) and occasional hulled wheat chaff fragments (3%). The identifiable cereal grains were mainly hulled wheat and hulled barley which may have been accidentally burnt

in the oven while being dried before storage and/or milling.

Oven flue [3050], fill (3055): this fill, from a flue ascribed to the same phase as [3515], produced modest amounts of material of mainly grains, which made up 68% of the quantified remains from the sample, together with smaller amounts of chaff (including wheat chaff) and wild plant/weed seeds. Cereals consisted of barley, including hulled and lateral grains, together with wheat, including possibly spelt and emmer/spelt-types. The assemblage indicates debris largely from the final stages of crop cleaning and food preparation, possibly from domestic hearths close-by, consistent with the backfilling of the flue with secondary material.

Phase 3

Oven fill (3551), and flue fills (3746), (3757): three samples from three different ovens produced only small or modest-sized charred plant assemblages, grains and weed seeds in flue fills (3746) and (3757), and grains and wild plant remains (mainly tuber/rhizome fragments) in oven fill (3551), and traces of chaff in two of these ovens. The grains may have been accidentally burnt in the ovens while being dried before storage or milling, mixed together with the remains of spent fuel (wild plant/weed seeds, tuber/rhizome fragments).

Oven flue fill (3749): this sample (likewise of Phase 3) produced a very rich charred plant assemblage (929 quantified items) and an item density of 44 per litre of processed soil. Cereal remains of mainly spelt wheat and hulled barley accounted for 81% of the quantified remains, grains making up 63% and hulled wheat chaff 18% of this total. The chaff may derive from the parching of hulled wheat spikelets in the oven to facilitate the removal of the glumes by pounding and then winnowing, and/or from the drying of semi-cleaned spikelets before storage. The two activities are difficult to differentiate because they produce similar charred plant assemblages (van der Veen 1989, 304). It is also difficult to establish the ratio of the hulled wheat grains to hulled wheat chaff because of the very large number of unidentifiable grains in this sample.

The hulled barley grains may also have been accidentally burnt while being parched in the oven to aid the removal of the lemmas, but again it is difficult to differentiate between this activity and simply the drying of barley before milling or storage because all three activities produce similar charred plant remains (ibid.). There were occasional sprouted hulled spelt

wheat grains and traces of loose cereal coleoptiles in this sample, but these few remains are probably the result of accidental germination because of damp conditions rather than the use of the oven for malting.

Wild plant/weed seeds, which made up the other 19% of the quantified remains, probably represent spent fuel from the oven and consisted mainly of small seeds, particularly from *Atriplex/Chenopodium* and *Rumex* species, by-products from fine-sieving of the cereals.

Other Contexts

Ditch fill (3506), Post-Hole fill (3742) and Scoop fill (3735), of Phases 2-4 but all late Roman in date: The samples from (3506) and (3472) only produced very modest charred plant assemblages of mainly grains (66% and 82% of the quantified items respectively) with little chaff and wild plant/weed seeds, while the fill of scoop (3735) contained just two grains. The remains from all three samples consist of debris largely from the final stages of crop cleaning/food preparation.

Trench D

All eight samples from Trench D contained charred plant remains. One sample came from a middle to late Roman ditch fill (of trench Phase 1) and seven from late Roman features of trench Phases 2 and 3 (four from two corn-drying ovens and three from sooty layers overlying a possible threshing floor), all of which produced very rich charred plant assemblages. These samples produced 65% of the quantified remains from the site with an item density ranging from 2.4 to an estimated 1038 per litre of processed soil.

Phase 1

Middle to Late Roman Ditch fill (4068): This sample produced a modest charred plant assemblage consisting of mainly cereal remains (largely grains and some chaff) of hulled wheat and hulled barley and a small number of weed seeds, debris from the final stages of crop-cleaning and food preparation, probably from small-scale domestic activities taking place close-by.

Phase 2

Late Roman Corn-Drying Oven [4062]/[4058]: this was the earlier of the two ovens excavated in this trench but nonetheless is dated to the later fourth century. It contained charred plant remains from two samples,

from a fill (4057) at the terminal of the flue (the opposite end to the stoking/rake-out pit), and from a fill (4070) at the mid-point of the flue.

The charred plant remains in the fill (4057) sample from the end of the flue produced a good sized assemblage consisting almost entirely of cereal grains (95% of the quantified remains) with only very small amounts of hulled wheat chaff and wild plant/weed seeds. Hulled barley was the best represented cereal followed by free-threshing wheat and much smaller amounts of hulled (spelt) wheat. These grains may have been accidentally burnt while being dried in the oven before storage and/or milling. The weed seeds were mainly from *Bromus* although the oat grains in this sample are also probably cereal weeds, these large seeds are characteristic of virtually fully processed crops.

The other fill (4070) sample from the mid-point of the flue contained a richer and higher concentration (estimated item frequency of 124) of charred plant remains, the flot only being partially (12.5%) sorted. There was a greater amount of crop-processing debris than (4057) although grains were still dominant (77% of the quantified items) with the identifiable remains consisting largely of free-threshing wheat grains, probably accidentally burnt while being dried in the oven before storage and/or milling. The domination of grains and specifically free-threshing wheat was also reflected in the scanned fraction of this flot. There was relatively little evidence for hulled wheat (grains and chaff) and barley, possibly residues from earlier use of the oven for other activities including de-husking of hulled wheat. The wild plant/weed seeds (8%) in the sample consisted of both large and small weed seeds, probably from fuel used for the oven.

Phase 3

Late Roman Sooty layers (4002), (4017) and (4037): the three samples from layers (4002), (4017) and (4037) later than and to the west of corn-drying oven [4062]/[4058] and overlying a clay/possible threshing floor (4077) all produced exceptionally rich charred plant assemblages with high estimated item densities of 223 per litre of processed soil in (4002), 262 in (4017) and 454 in (4037). Only fractions (between 3.125% and 25%) of these flots were sorted and quantified although the remaining parts of each were scanned.

Cereal debris accounted for 96% of the quantified charred plant remains in upper layer (4002), consisting largely of chaff fragments (59%), virtually all from hulled (spelt) wheat; grains of mainly hulled wheat and a few free-threshing wheat and hulled barley grains made up the other 37%. The few wild plant/weed seeds (4%) in the sample consisted of both large weed

seeds, *Bromus*, *Avena*, and small ones, for example *Rumex*. The remains in this sample may represent the rake-out from the nearby oven, largely from accidents during the use of the oven to facilitate de-husking of spelt wheat and/or from the drying of spelt spikelets before storage.

Cereal debris made up a similarly large proportion (97%) of the quantified charred remains in the lower sooty layer (4017) but with grains (67%) rather than chaff (30%) making up most of this material. Most of the grains in the sorted fraction, however, were poorly preserved and could not be identified although the grains and chaff in the scanned fraction of the flot established that hulled wheat, specifically spelt, was the main cereal in the sample with smaller amounts of free-threshing wheat and hulled barley. The relatively few weed seeds (3% of the quantified remains) again consisted mainly of large wild grass seeds (*Bromus*, *Avena*) but with some small weed seeds (*Rumex*, *Atriplex/Chenopodium*). These remains are once more largely from accidents associated with the de-husking of spelt wheat and/or from the drying of spelt spikelets before storage probably carried out in the oven nearby although the presence of free-threshing wheat and barley grains in the same sample suggesting previous uses of the oven for drying crops.

The rich charred plant assemblage in a sample from a sooty layer (4037) further to the west but also overlying clay/threshing floor (4077) also consisted largely of cereal debris (93% of the quantified remains) with a mix of both grains (57%) and chaff (36%); again, most of the grains were not identifiable although the scanned fraction of the flot established that there was more wheat than barley with evidence for both hulled and free-threshing grains, while large amounts of chaff again suggest that spelt was the main cereal in this sample. The small weed seed assemblage (7% of the quantified remains) mainly consisted of large wild grass seeds (*Avena*, *Bromus*) with fewer small weed seeds, for example *Atriplex/Chenopodium*. These remains are broadly similar to those in layer (4017) with debris probably from the nearby oven, mainly from accidents during its use to facilitate the de-husking of spelt wheat and/or from the drying of spelt spikelets before storage but also from the drying of free-threshing wheat and barley grains.

Late Roman Corn-Drying Oven [4028]/[4086]. This was the later of the two ovens in Trench D and lay to the north of oven [4062]/[4058]. Two samples from this oven produced charred plant remains, from the fill (4076) at the terminal of the flue (opposite end to the stoking/rake-out pit) and from the lower fill (4026) of the stoke-hole/rake-out pit.

The sample from fill (4076) produced the richest charred assemblage from the site with an estimated density of 1038 items per litre of processed soil based on a c. 3% (1/32nd) fraction of the flot that was sorted and quantified. The sub-sample consisted virtually entirely of charred grains (98% of quantified remains), almost all the identifiable grains belonging to hulled barley with only traces of hulled and free-threshing wheat (grains and chaff) and weed seeds. The remaining scanned fraction (97%) showed a similar picture, consisting almost entirely of hulled barley (both lax and dense-eared forms) with very little evidence for hulled and free-threshing wheats. The scanned fraction did produce evidence for a wider range of weeds although mainly represented by only occasional or small numbers of seeds with the exception of *Raphanus raphanistrum*; this weed grows in sandy and loam soils and is an acid soil indicator (Hanf 1983) which may be considered unusual in an area of predominantly calcareous soils, possibly suggesting the import of this barley crop from further afield; however rainwater may have led to slight acidification of the more local arable soils. *Raphanus raphanistrum* and the *Chenopodium/Atriplex* and *Fallopia convolvulus* seeds in this sample may also point to the spring sowing of this barley crop. This assemblage represents a virtually clean barley deposit probably accidentally burnt in the oven while being dried before use or storage.

The other sample from Oven [4028]/[4086], from the lower fill (4026) of the stoke-hole/rake-out pit, produced a fairly large charred plant assemblage with an estimated item density of 161 (based on a 12.5% fraction) and a broadly similar composition to (4076) with grains (90% of the quantified remains) dominating the assemblage and again consisting mainly of hulled barley. There were only small numbers of wheat grains, mainly hulled wheat including spelt on the basis of a few chaff fragments, and traces of free-threshing wheat. The weed seeds (7% of the quantified remains) consisted mainly of large wild grass seed including *Bromus* and *Avena*. These remains probably derive largely from the accidental burning of a clean barley crop being dried in the oven.

Trench E

Two samples from late Roman ditch [5003] fills (5007) and (5012) from Trench E produced only small amounts and low item densities (<1 per litre of processed soil) of charred plant remains (<1% of all the quantified remains from the site). The remains consisted of a mix of grains and chaff fragments of

mainly hulled (spelt) wheat and a few weed seeds (in fill (5012) only), representing low levels of debris from the final stages of crop-processing and food preparation, possibly from domestic activities taking place close-by.

Summary

The charred plant remains from Hatcliffe Top show that spelt wheat and (six-row) hulled barley were the main cereals being used on the site in the middle to late Roman period, although free-threshing wheat, rarely found in large amounts at this time, also appears to have been an important crop in the late Roman period. There is also evidence (albeit just one seed) for the use of flax in the late Roman period. The emmer, oat and rye grains are probably weeds while there is no conclusive evidence for the cultivation of pulses. The cereal crops may have been cultivated locally, the weed seeds suggesting the use of the loamy and clayey soils around the site, possibly extending to the lighter calcareous soils of the Lincolnshire Wolds to the west. There is tentative evidence for tilling by ard as well as spring and winter sowing of the crops.

Cereal remains (grain and chaff) dominated the charred plant remains from the site with relatively few large and small weed seeds, debris largely from the final stages of crop-processing (including the de-husking of hulled wheats and fine sieving of the cereals) and food preparation.

The spatial distribution of the charred plant remains shows that there was not a great deal of material in Trenches A, B and E, the small botanical assemblages in the seven middle to late Roman samples from these areas suggesting that only small-scale domestic activities (fine-sieving, de-husking, food preparation of cereals) were taking place in these areas of the site. This needs qualifying though in the case of Trench A given that the three likely late Roman flues at the western end of the trench were not sampled, though hand-collected material was gathered.

The bulk (91%) of the quantified remains from the site were from Trenches C (26%) and D (65%) containing the corn-drying ovens. There were seven middle to late Roman ovens/corn drying ovens in the south-western area of Trench C, six of which were sampled, with the rich remains from late Roman oven fill (3749) suggesting different uses for this feature, the de-husking of hulled spelt wheat and/or the drying of spelt spikelets and also the drying of hulled barley. The samples from the other five ovens, however, contained smaller and lower concentrations of charred plant remains on the basis of which it is difficult to comment on the potential uses of these

features. The two late Roman ovens from Trench D both contained richer and denser concentrations of charred plant assemblages. The remains from flue fills of oven [4062]/[4058] suggest that this feature was used for the drying of free-threshing cereals (hulled barley and free-threshing wheat) before storage and/or milling. The rich grain assemblages in fills (4076) and (4026) associated with oven [4028]/[4086] suggests that this feature was used for drying barley, possibly before storage or milling. Three very rich charred plant assemblages from layers immediately to the south-west of oven [4028]/[4086], possibly raked out debris from this feature, or from another oven beyond the limits of the trench, suggest de-husking of spelt wheat and/or drying of spelt spikelets before storage, showing the potential varied use of this feature, or others in the vicinity, at this time (trench phase 3).

8.3 Snails

D. James Rackham

A number of the samples produced no snail shells at all, possibly due to a relatively high acidic ash content from the oven fires which may have dissolved the shells. In other samples just a few shells have survived, their numbers low possibly also due to a high ash content, although other factors could also account for such low densities. The highest shell densities were found in the later Roman ditch samples from Trench E, the samples with two of the lowest charred plant item and charcoal density, presumably indicating very little fire debris and ash entering the deposits, and probably a fairly slow build-up of sediment allowing a greater density of snail shell deposition. The difference in shell concentrations between contexts (5007) (73 shells/litre) and (5012) (8/litre) (see Table 8.6) may reflect the differences in the rate of sediment build-up between a lower and upper fill of the ditch. Shells of the fragile small blind burrowing snail *Ceciloides acicula* occur throughout the deposits (Table 8.6), often where other shells are rare, and it is probable that the bulk of these reflect recent snails that have burrowed into the archaeological deposits, and are not part of the contemporary death assemblage.

Not surprisingly there is little to no evidence for the site being at all wet. A single shell of *Anisus leucostoma*, an aquatic species commonly found in ditches that dry up seasonally, in late Roman gully fill (3004) in Trench C is the only indicator, and this shell could have been introduced with vegetation collected elsewhere. In general the species represented in the less rich samples (Table 8.6) are characteristic

Table 8.6 Identified snails from the samples.

[illegible]

of grasslands, although the shells of *Discus rotundatus* and *Oxychilus alliarus* that occur in six of the samples (Table 8.6) might indicate the proximity of damper and more shaded habitats. The 10 shells of *O. alliarus* in (4026), the lower fill of an oven rake-out pit, and 9 of *D. rotundatus* in (3513), the lower ashy fill of an oven flue, suggests that these are probably individuals that ‘invaded’ the flues after they went out of use, perhaps after the site was abandoned.

The lower fill of Ditch [5003] in Trench E (5012) is dominated (70% of shells excluding *C. acicula*) by shells of *Vallonia costata* and *V. excentrica*, typical dry grassland species, with several other taxa of grassland or catholic habit. There is also a minor element characteristic of woodland or shaded habitats, with *D. rotundatus*, *Oxychilus* sp., and *Vitrea* sp. among others, making up 13% (excluding *C. acicula*) of the shell assemblage. This latter element is much more prominent (27%) in the middle fill of the ditch fill (5007), and suggests that the ditch must either have been fairly overgrown or perhaps more likely had a mature hedge along its bank. *D. rotundatus* has been found in numbers associated with ‘woodland relic’ hedges in Huntingdon, North Warwickshire and Shropshire (Cameron *et al.* 1980), and also ‘enclosure’ hedges in Shropshire, and the diversity of woodland taxa in (5007) would be consistent with a substantial hedge along this boundary, a boundary that possibly equates with the large enclosure ditch along the north east side of the site shown by the geophysics (Fig. 3.12).

The still dominant grassland fauna (54% excluding *C. acicula*) in (5007), *V. costata* and *V. excentrica*, indicates that the ditch was bounded by pasture on one side. Species found in more disturbed open habitats or bare earth, such as *Pupilla muscorum* and *Helicella itala*, which as sometimes associated with arable are very limited in these assemblages and it would appear likely that the field sloping down from the settlement to the valley floor may have been pastoral throughout its Roman history. It is possible that the middle and upper fills of this ditch post-date the occupation of the Roman settlement and the significant increase in the ‘woodland’ element could possibly be related to a period of dereliction after abandonment of the farmstead. A more detailed analysis of a number of smaller unit samples through this ditch and other ditches on the site would be required to attach greater confidence to these conclusions.

Steven Willis writes: One largely complete globular land snail shell (c. 4cm) and fragments from two others, all hand collected from stratified contexts at Trenches B and E (contexts (2017), (5002) and (5011)), were submitted for specialist identification through the assistance of Dr Elizabeth Somerville. The largely complete shell came from (5011), a fill of Ditch [5003]. It had been wondered whether these specimens were either the common Garden Snail (*Helix aspersa*) or the similar in appearance

(especially when little colour survives) edible Roman Snail (*Helix pomatia*) long thought to have been introduced to Britain in the Roman period. The Roman Snail is known from southern Britain, with a sizable sample recovered at Chedworth villa. Given that it is thought that the Roman snail was probably introduced in the fourth century AD (Cuming 2013) and is known to prefer lime-rich soils there was some prospect that these three individuals might be examples of the Roman Snail, despite the latitude of the Hatcliffe Top site. Specialist examination established that these shells were examples of the Garden Snail.

8.4 Hand Collected Animal Bones

D. James Rackham

Introduction

A small collection of 2574 bone fragments, weighing over 25 kilogrammes, were recovered by hand during the excavation. A number of these were further broken in antiquity or during excavation. Bone preservation is generally good with only one or two contexts showing poorer condition. The deposits date from the middle Roman period to the medieval and modern periods (Table 8.7) although the bulk of the bone has been assigned to the middle and late Roman periods (bone from modern agricultural ploughsoil/topsoil was not collected). The assemblage has been recorded following the procedures of the Environmental Archaeology Consultancy (see Key attached to the archive catalogue).

Recovery appears to be excellent as evidenced by a relatively high proportion of smaller bone fragments being recovered by the excavation team – 20% of the bone fragments weighed 5 grammes or less, and many fragments were a gramme or less in weight (13.6% of total fragments; see also Fig. 8.2). Most of the identified sheep/goat bones weighed less than 5 grammes while most of the cattle bones weighed more than 5 grammes so it is clear that poor recovery of the smaller bones would have had a serious impact on the ratio of the two most important species. For instance just 14 identified cattle bones or teeth weighed a gramme or less but seventy sheep/goat bones weighed no more than a gramme (Fig. 8.2). The quantity of loose teeth, long bone fragments and unidentified fragments (Table 8.10) is also illustrative of the level of fragmentation. However this relatively efficient recovery means that less than 37% of the assemblage could be identified to a species, the remainder being classified to size categories only, or merely to unidentified mammal. Over 83% of the assemblage has been assigned to the Late Roman

period (mainly mid-late fourth century), just 5% to the middle or middle to late Roman period and 4.8% to the medieval, with other period contexts producing insignificant quantities (Table 8.7) and, except for the Anglo-Saxon features, probably also largely date to the Late Roman period. In all cases the medieval assigned contexts are cultivation furrows, and the animal bone from these is probably reworked Roman material, although some may have been introduced through manuring of the medieval arable. In contrast the few bones assigned to the Anglo-Saxon period derive from two gully features and their contents might perhaps be contemporary rather than derived, although the thirty six bones allow no discussion. Some of the fragmentation in the Late Roman assemblage might be attributable to butchery or animal scavenging but there is little evidence for this on the bones. Just 1.5% of the bones show evidence of butchery in the form of chop or cut marks, with 66% of these cattle or cattle sized bones, and 2.8% show evidence for dog gnawing, with just over half of these being cattle and cattle sized animals. A few of the bones, 2.1%, have been charred or calcined (fully burnt) presumably after discard.

With so much of the assemblage being assigned to the Late Roman period (83% by weight and 82% by fragment numbers), and relatively little to the earlier Roman 'phases' we really cannot consider whether the pastoral husbandry changed through the history of the site. We are forced to restrict the analyses to the Late Roman period, sometimes incorporating data from the other 'phases' to give a more general later Roman picture.

Three methods are available for assessing the relative importance of the different species at the site – the number of identified fragments, the total weight of identified bone of each species and the total frequency of recorded anatomical zones. Each addresses a slightly different aspect. In terms of fragment frequency cattle are the most important domestic species, with just under 50% of the bones that have been identified to the major domestic farm taxa (cattle, horse, sheep and pig) in the Late Roman period. Sheep/goat comprise 37%, pig 7.3% and horse 5.6% (see Table 8.7). If we consider the weight of bone then cattle make up nearly 74% of the Late Roman assemblage, sheep/goat just 9.1%, horse 14% and pig 3% (Table 8.7). No bones could be identified to goat, so it is assumed that most if not all of the sheep/goat category are sheep, and will be referred to as such below in the discussions.

Bone weight is almost certainly a better indication of the 'meat' contribution made by each species than fragment counts so it is clear that cattle are even more important than their fragment counts suggest. Finally, the count of anatomical zones is a better indicator of

the relative ratio of animals slaughtered than fragment counts, the latter taking no account of differences in the degree of fragmentation between species. Among the four major taxa cattle make up 44.5% of the recorded anatomical zones, sheep 35%, pig nearly 7% and horse 10.7%. The drop in sheep and cattle relative to the fragment counts is a result of the significantly lower fragmentation of the horse bones. If we calculate the fragmentation index of these species (total number of anatomical zones/total number of fragments) then horse has an average of 0.92 zones per fragment, cattle 0.43, sheep and pig 0.45. This indicates a similar level of fragmentation for the recovered bones of cattle, sheep and pig, but half this level for the horse bones (i.e. the number of horse bone fragments at the site represent twice the proportion of the horse skeleton, than do the same number of fragments of cattle, sheep and pig their respective skeletons. Fragmentation indices of 0.43-0.45 represent a high level of fragmentation, and even 0.92 is a low index for horse bones, so the assemblages from these trenches are fairly severely fragmented. This is not typical primary food refuse, which is unlikely to be so fragmented, and indicates either secondary processing, such as breaking up the bones for stewing/boiling, or, probably more likely, reworking and trampling of the bone after discard.

The other species identified in the assemblages include dog, cat, fox, brown hare, red deer, chicken, goose, mole, frog/toad and unidentified cetacean. While the chicken and geese were domestic, although no goose fragments were complete enough to measure all were consistent in size with domestic birds, only the hare suggests hunted game. Just one of the unidentified bird bone fragments could be classified as not chicken or goose, a small second phalanx of pigeon size. The red deer fragments were a tine and a worked piece of antler cortex indicating utilisation of the antler rather than meat and the single piece of cetacean bone, which has not been specifically identified, was heavily chopped and presumably functioned as some sort of chopping block. Foxes may have been killed for their fur and they can be eaten, but they could equally have been killed to prevent them scavenging or hunting on the farm, or by the farm dogs. Both dogs and cats were kept at the farm. The dogs included both short and stocky animals and medium and large dogs, but limited measurements could be taken on the fragments. These animals may have been functional, for hunting, herding and keeping the rodent numbers down, but might equally have been household pets. A partial skeleton of a medium sized dog was recovered from context (5001), a Late Roman fill of Ditch [5003] representing a disturbed burial. Fifteen pieces of the

cranium of a human baby were recovered from context (3024), the fill of pit cut [3025] in Trench C where they are likely to represent a secondary element. This may have been infanticide or disposal of a baby that died.

One of the aspects that stands out from this assemblage is the lack of non-domestic meat sources, perhaps the odd hare, wild song bird, eel and small fish and marine shell (see sample finds above) but these were insignificant in terms of the food economy although they may have had more significance for special meals or feasts.

We can briefly consider the spatial patterning across the site. This has been addressed by considering the whole assemblage from each trench. Although some trenches include several phases the Late Roman material dominates in all the trenches. The overall

fragmentation varies across the site with average bone fragment weight as low as 5.2g in Trench B, but as high as 14.6g in Trench D (Table 8.8). The overall fragmentation index tends to follow this pattern with just 0.12 zones per fragment in Trench B as against 0.45 per fragment in Trench D. Such differences could be caused by different personnel in the separate trenches and their efficiency of collection (i.e. variable recovery), but this seems not to be a factor in this case where largely the same excavators worked in both trenches (S. Willis pers. comm.) and so it presumably indicates variations in post-discard reworking, trampling, scavenging, etc. The slight discrepancy between average fragment weight and fragmentation index in Trench E compared to the others trenches (higher index despite similar average fragment weight) can be attributed to a higher proportion of sheep bones

Table 8.7 The frequency of bone fragments assigned to each taxa category arranged by 'period', and the weight of each taxa in the Late Roman group.

Species	R?	M-L R	L R	A-S	Med.	Mod./ Mod?	U/S Undated	L R weight (g)
Human			1					10.0
Horse		11	41	1				2542.0
Cattle	1	20	361	4	17		1	13619.0
Cattle size		21	566	6	45	1	3	2792.8
Sheep/goat		20	287	7	6	1	1	1541.2
Sheep			7					226.0
Sheep size	3	21	440	15	29	3	8	601.1
Pig		5	56		3	1		5230.7
Dog		5	20					115.0
Dog or fox					1			1.0
Fox			3					20.0
Cat			2					2.0
Red deer			2					8.0
Hare			1					0.3
Mole			1					0.2
Cetacean			1					511.0
Small animal		2	9	1			3	4.6
Unidentified mammal		38	403		21	1	1	274.3
Chicken			18			1		20.5
Chicken size			1					1.0
Goose			6					31.0
Goose size			3					3.0
Unidentified bird		1	11	2	1			4.5
Frog/toad			3					0.6
Totals	4	144	2243	36	123	8	17	27559.8

(Key: R?- uncertainly Roman; M-L R - mid-Late Roman; LR - Late Roman; A-S - Anglo-Saxon; Med. - Medieval; Mod. - Modern; U/S - unstratified).

(Table 8.9). The earlier contexts in this trench have some mid-Roman pottery (S. Willis pers. comm.) and this group has the only evidence suggesting a change in the species proportions at the site. It suggests that sheep may have been relatively more important in the mid-Roman period than in the later Roman period (Table 8.9).

Table 8.8 The number of bone fragments, total weight and average fragment weight and fragmentation index by trench.

Trench	Number of bone fragments	Total weight (g)	Average fragment weight (g)	Overall fragmentation index
Trench A	551	5650	10.2	0.26
Trench B	750	3888	5.2	0.12
Trench C	660	7633	11.6	0.27
Trench D	487	7123	14.6	0.45
Trench E	126	1364	10.8	0.33

Table 8.9 The number of fragments of each species/category by trench.

Trench	A	B	C	D	E
Human			1		
Horse	5	11	10	18	8
Cattle	98	97	98	96	16
Cattle size	133	186	172	136	15
Sheep/goat	82	75	83	60	21
Sheep	4		2	1	
Sheep size	117	143	147	96	18
Pig	15	15	19	8	5
Cat	1			1	
Dog	6	4	2	9	5
Fox				3	
Red deer	1			1	
Cetacean			1		
Hare				1	
Mole	1				
Small animal	3	3	4	3	1
Chicken	2		16		
Chicken size		1			
Goose	2	2		2	
Goose size	1	1		1	
Unidentified bird	5	5	3	1	1
Frog/toad				3	
Unidentified	75	205	102	47	36

All the excavated trenches produced bone remains except for the small Trench F which was located on the slope beyond the plateau and the main focus of activity. Otherwise, the bones appear to be fairly evenly distributed across the trenches. A and E are the smallest trenches, but E had a limited number of features and looks to have been a boundary at the edge of the farm complex, probably accounting for the limited number of bones. Trench D is interesting in having a relatively small number of bone fragments, but much less fragmented perhaps reflecting more primary disposal of the bone in this area. Many of these are gully and ditch deposits. Most of the bone across the whole site was recovered from gully and ditch fills (Fig. 8.3) with occasional flues and layers producing above average quantities. In principal this may reflect the size of the features and the quantity of soil excavated rather than bone fragment density; volumetric data on soils excavated were collected and these are considered in Chapter 11. The biggest assemblages were collected from the main fill of Ditch [1048] in Trench A, from fill (2017) of Ditch [2006], and the fills (2002), (2018), (2019) of Gully [2009] in Trench B, furrow fill (1007) probably including bone derived from the fills of flues [1012] and [1057] in Trench A, the main fill (3055) of oven flue [3019]/[3042]/[3050] in Trench C, and fill (4003) of Gully [4004] in Trench D. These richer deposits are spread across the trenches and would seem to reflect a general level of discard and rubbish across the site.

The assemblages appear to represent a mix of primary, secondary and tertiary deposition with occasional intact bones or two or three bones probably articulated when discarded, and small fragments of bones and loose teeth presumably the product of secondary processing and/or trampling, with a few burnt or charred bones presumably introduced with ashes from the fires.

Cattle bones

As assemblages get more broken up certain more easily recognisable elements become relatively more abundant and those less easily recognised when broken up become rarer. This is reflected in the quantity of loose teeth in Table 8.9 (58 cattle teeth), the number of rib fragments (134 cattle and cattle size) and the higher counts of more robust or recognisable bones such as mandible, scapula, pelvis and metapodials. This makes confident use of the data on element frequency problematic in severely fragmented assemblages and limits what we can say about this sample. All parts of the carcass are present but vertebrae and some of the

Table 8.10 The frequency of fragments of each element for the major identification categories in the middle to Late Roman and Late Roman groups.

Bone	Horse	Cattle	Cattle Size	Sheep/Goat	Sheep Size	Pig	Indet.
Horn core		1		5			1
Skull	1	18	20	16	5	4	9
Hyoid		2		2	1		
Maxilla				1			
UC						1	
UI						1	
DUP3/4		2		2			
UPM2-4		4		2		2	
UM1-3	2	8		16			
Mandible	4	61	14	32	3	7	4
DLI				2		1	
DLP4		4		3			
LC						3	
LI	1	10		11	1	2	
LM1-3	1	18		27		1	
LPM2-4		7		2		1	
M2-3						2	
Tooth		5	4	4	2		12
Atlas				1			
Axis		1		1			
Cervical vert.		7	8	3	1		
Thoracic vert.		6	9	3	3	1	
Lumbar vert.	3	9	5		4		
Sacrum		3	1				
Vertebra			13		4		
Rib	3	17	117	4	102	1	10
Scapula	1	23	21	7	3	2	
Humerus	2	5	3	15	10	5	
Radius	1	13	1	27	6	2	
Ulna		10	1	4	3	1	1
Carpals	3	3					
Metacarpus		12		17		1	
Innominate	2	16		14	2	3	
Femur	1	13	3	10	17	3	2
Patella	1						
Tibia	1	14	3	14	17	5	
Calcaneum		9	1	4		1	
Astragalus	1	6		1	1		
Centroquartal		6		1			
Metatarsus	2	23		33		3	
Metapodial	3			2	2	1	
Lateral metapodial	1						
Sesamoids	1						
Phalanx 1	1	14		5		1	
Phalanx 2	2	9		1		1	
Phalanx 3	3	2		2			
Long bone frag.			145		209		1
Unidentified frag.			194		39		362

smaller bones are under-represented; the smaller bones, such as carpals, sesamoids and phalanges, probably in part due to a recovery bias against the smaller bones, the vertebrae perhaps because when fragmented the smaller pieces become difficult to identify, but these variations could reflect contemporary processing of the carcass. A shaved sliver of metacarpus shaft in context (1031) might be waste from bone-working. Sixteen cattle bones were chopped or cut, three were burnt and twenty eight were recorded as gnawed.

The fragmentation is likely to have had less impact on the evidence for the age structure of the cattle cull although clearly the more fragile juvenile bones could have been lost through mechanical damage

or scavenging. Dental and epiphyseal fusion data are used to assess the age at death of the cattle. The presence of juveniles is indicated by an unfused acetabulum and a mandible and one loose deciduous premolar with little or no wear, plus eleven bones that were described as small, porous and juvenile or 'calf' during recording but carried no epiphyseal junctions. These represent animals perhaps 0-3 months old, or a little older, and could be natural deaths and/or culled animals.

The next cull suggested by the epiphyseal data was prior to 15-18 months on the basis of two unfused phalangeal epiphyses and a collection of seven mandibles and loose teeth which suggest slaughter

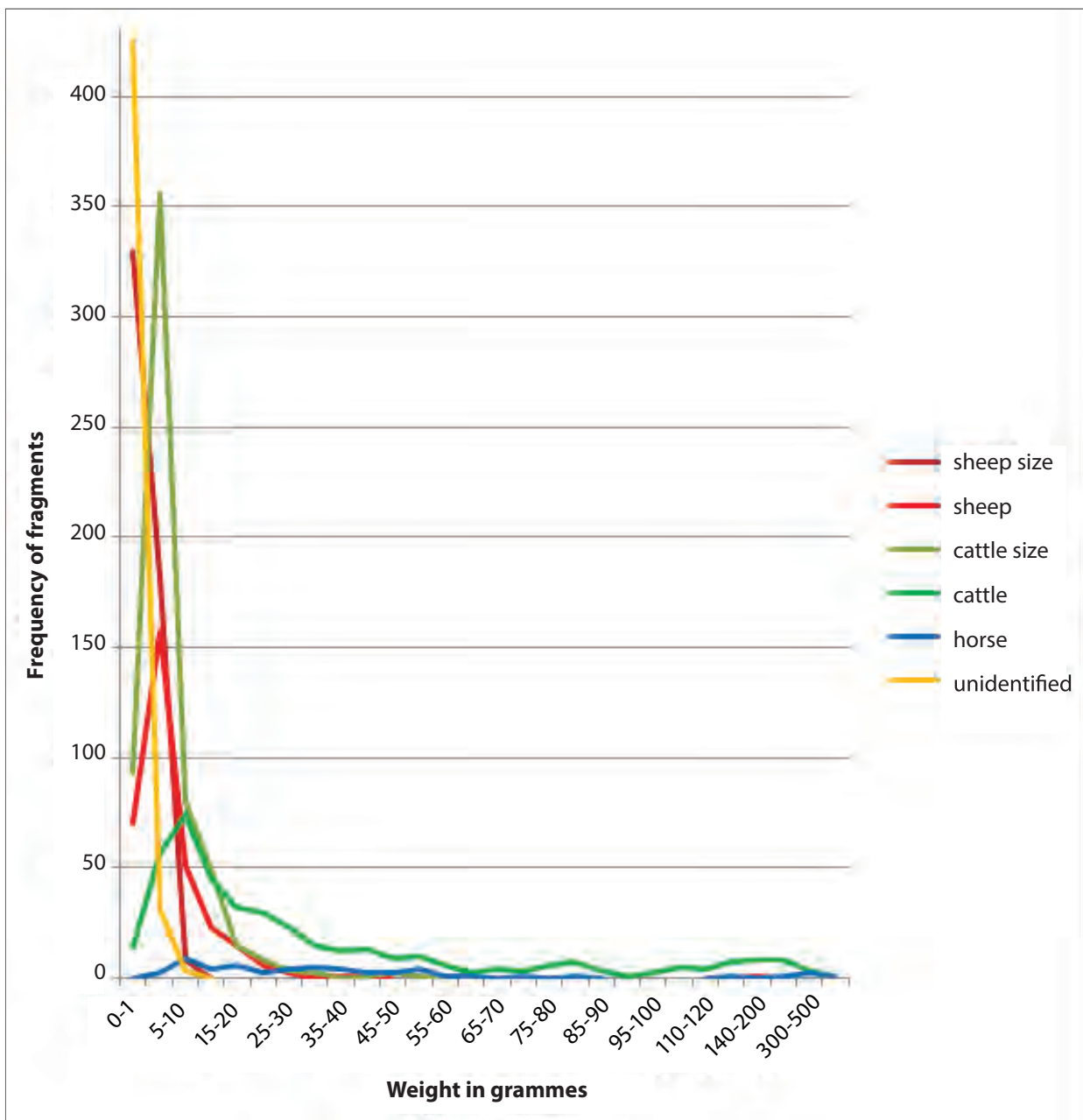


Fig. 8.2 The frequency of bone fragment weight of sheep size, sheep, cattle size, cattle and horse categories, together with unidentified fragments.

between perhaps six and fourteen months (Jones and Sadler 2012, Halstead 1985, Grigson 1982). Three bones suggest a cull at or before 2-2.5 years old with one mandible and four loose teeth consistent with an age of between 18 and 24 months, the latter part of their second year, and if calved in spring, these would be late autumn to winter culls.

The epiphyses of a few bones indicate slaughter before 3-3.5 years and one mandible and some twelve loose teeth would be consistent with this. The remaining bones, mandibles and loose teeth indicate the slaughter of adults and elderly individuals but do not permit any closer estimate than greater than 4 years, although a few fused vertebral epiphyses and some heavily worn third molars might indicate animals of 7 or 8 plus years. Unfortunately the data are too limited to quantify these age groups, but the dental data breaks down broadly into teeth or mandibles of two juveniles, and up to eight immature animals, eight sub-adults, nineteen adults and three elderly beasts. A study conducted on cattle mandibles from Roman deposits at Carlisle inferred annual ages

from the lines formed in the cementum and equated with annual cycles of deposition (Rackham 1986). Assuming a similar rate of tooth wear on the animals at Hatcliffe Top then these adult animals could include beasts up to fifteen years of age and perhaps above before slaughter. This older group may still include calving cows as well as cows or bullocks being used for draught.

The metrical data is too limited to be useful, but four bones were described during recording as large (both in terms of the site assemblage and recording experience) and one fused distal tibia was described as very large, indicating an unusually large example, although no bigger than the larger fourth century examples from Roman Lincoln. Occasional large cattle are recorded on Roman sites, and a very large astragalus was recorded at Nettleton (Rackham 2013) with the suggestion that this may have been bred from stock imported from Europe, possibly for draught purposes. This tibia at Hatcliffe Top is not of this scale, but merely matches the larger animals in local Roman assemblages.

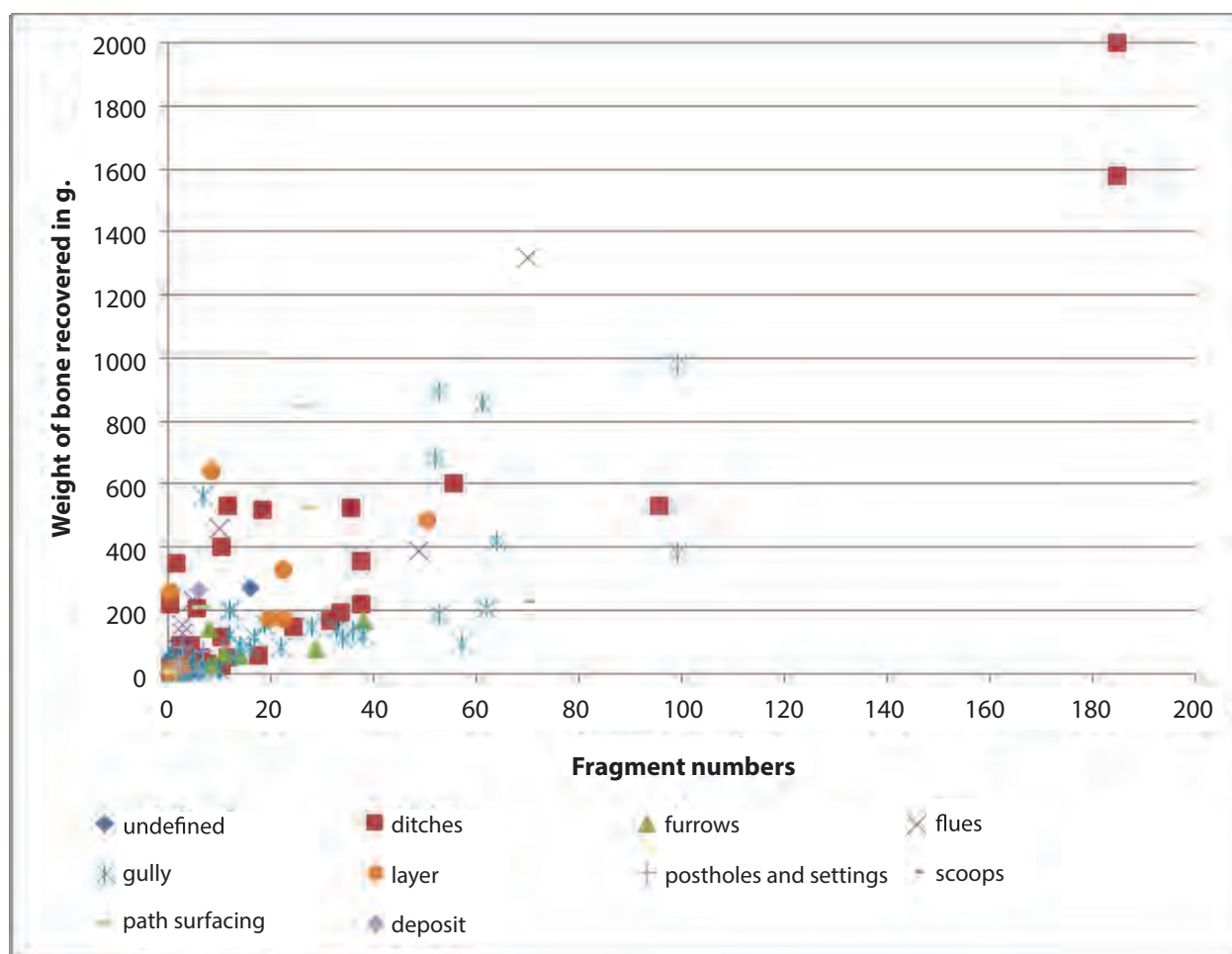


Fig. 8.3 Numbers and weight of bone from each context type.

Sheep bones

The bone fragments of sheep show a more evident bias due to robustness and ease of identification. Mandibles, loose teeth, radii and metapodials are the best represented elements (Table 8.10) but this seems unlikely to reflect the original deposited assemblage, but rather resulting from the progressive concentration of identifiable robust fragments as the bones suffer re-deposition, trampling, scavenging and erosion. All parts of the skeleton are present but their relative frequency may be due more to post-depositional factors than any contemporary human behaviour. Six bones shows signs of butchery, knife cuts and chop marks, three were burnt and one was 'worked', the mid-shaft of a metatarsus – probably a handle – in the fill (4019) of stoking pit [4062]. Twenty one bone fragments show evidence for dog gnawing.

The data set for ageing the sheep/goat is smaller. Just one distal humerus is unfused suggesting a lamb younger than 10 months (Silver 1969) and two bones described as very small lamb or juvenile probably less than 6 months, while a loose barely worn deciduous premolar 4 (dpm4 – Grant stage b) and a loose barely worn molar 1 (M1 – Grant stage a) would also suggest animals of less than six months, while a mandible with the M1 in wear (d) but the M2 erupting through the bone suggests a lamb of perhaps 6-12 months (Greenfield and Arnold 2008). These are the only clear indicators of first year lambs although three other loose teeth could derive from animals of between six months and a bit more than a year (dpm4 at g and M1 at e). An unfused first phalanx indicates an animal younger than 13 months to two years (Silver 1969; Clutton-Brock *et al.* 1990) while two maxilla and four loose teeth equate with animals between one and two years. Two unfused distal metatarsi suggest sheep culled at less than 20-28 months (*op. cit.*), while the wear on six loose M1 and M2 (M1 Grant stage h; M2 stage e) fall across a potentially wide age range from over 12 months up to perhaps three or four years (*op. cit.*), with the M2s probably off younger animals than the M1s. An unfused proximal calcaneum and two proximal femora derive from animals slaughtered before 30-36 months (*op. cit.*), and four vertebrae have both anterior and posterior centrum epiphyses unfused, and just two have the anterior one fused and the posterior unfused, and one both epiphyses fused. The latter two may derive from animals over five years of age and nearly five when culled, while the vertebrae with both unfused were younger than five. A group of five loose teeth and one mandible fragment derive from animals that were probably culled around three years of age or a bit older, while one mandible and three loose teeth can

probably be equated with animals of 4-6 years. Four loose teeth derive from elderly animals, potentially six years or older when culled. With so few mandibles with a complete tooth row these data have insufficient precision to construct a mortality curve but lambs in the first six months and the second six months, animals in their second and third years and older sheep of 4-6 years and older were culled. Of these groups the greater number of teeth and jaws fall into the adult age categories (20, four of which are elderly), six into sub-adults, four immature and two juveniles.

Pig bones

It seems likely that the pig bones have suffered equally as much as the sheep and cattle, and may in fact have suffered more since such a high proportion of the bones derive from juveniles and were likely to have been favoured by scavenging dogs, although only five bones were recorded as carrying evidence for gnawing. A chop mark on a scapula is the only evidence observed for butchery of the pig bones. Vertebral fragments are seriously under-represented in this small assemblage but this could be due to the difficulty of identifying small fragments of vertebra to species, and some of those classified as 'sheep size' could be pig. The mandible is the most abundant element fragment, and this is fairly typical of pig assemblages and probably reflects their roust character and ease of identification.

The ageable bone sample is very limited and only three of the pig bones have fused epiphyses, an acetabulum that has fused by a year old, a proximal phalanx and a distal tibia that fuse by two years. One very small unfused metapodial shaft fragment must derive from a small piglet. There are no fused epiphyses that fuse after two years. Of the five mandible and skulls with dentition, one is of an animal less than 1 year old, one just over a year, one about 18 months, one of 2-3 years and an adult female with a heavily worn M1 (stage m).

Horse bones

There are too few horse fragments for their relative frequency to be meaningful, and as noted above they are half as fragmented as the sheep and cattle bones. None the less one radius has been chopped, two bones have been burnt – presumably thrown on the fire – and three have gnaw marks indicating availability to scavengers, although these impacts are less than on the cattle and sheep.

Of the ageable horse bones one distal metapodial has just fused, from an animal of 1-2 years old, all the remaining fragments have fused epiphyses except for three posterior epiphyses of lumbar vertebrae which fuse at about five years of age (Silver 1969), one of which on a centrum where the anterior epiphysis has fused. Just one other of the 39 identified horse bones indicates the presence of a juvenile or immature animal on the basis of its porosity and size.

Animal husbandry

Reconstructing the animal husbandry at the site from these data is problematic. The measurement data are too limited to suggest any identification of male, castrate and female animals on the basis of bone size, the data on the age at death is insufficient to reconstruct the cull structure, and the assemblage is fairly heavily fragmented and the results may be biased by the increased difficulty of identifying small fragments to species, and the potential loss of more fragile juvenile bones. The following discussion is therefore tentative.

Owing to a relatively efficient level of recovery by the excavators the species proportions in the assemblage are probably reasonably representative. Cattle is clearly the dominant species, whatever method of quantification is used, and must have supplied the bulk of the meat consumed (74% by weight of cattle+horse+sheep+pig bones). Horse bones represent 14% of this weight but whether they were eaten or not is more difficult to assess. Their fragmentation is less, suggesting less butchery, processing and reworking, but the thirty nine Late Roman horse bones are distributed through 20 contexts with no indication of partial skeletons, one radius fragment is chopped, two fragments are burnt and two have dog gnawing, all suggesting disarticulation and processing, although this evidence is less abundant than on the cattle and sheep bones. So the horses may have been eaten. Sheep/goat were less important by weight and pig the least of these four animals. But this potential importance in terms of meat does not reflect the relative numbers of stock. If we use the total zone counts as a measure of relative frequency of the species then the ratios are approximately 6.3 cattle: 5 sheep: 1.5 horses and 1 pig, so numerically the farmstead appears to have maintained a large cattle herd, a smaller sheep flock, with a number of horses and pigs. This of course assumes that animals are killed on site for food in equivalent ratios to their stock numbers on the farm, and this may well not be the case, and since all

animals will have been walked to markets, such as Caistor and Market Rasen, an excess of sheep sold at market would not be recognised among the bones at the site if the occupants favoured beef. There is just a trace of an indication that sheep may have been more important in the middle Roman period, and this perhaps agrees with other sites. At Nettleton where the assemblages mainly date to the early Roman and Iron Age periods sheep are more abundant than cattle (Rackham 2013), and at Dragonby (Harman 1996) sheep dominate up to the end of the third century AD, but at Barnetby le Wold (Snelling *et al.* 2002) in Iron Age and early Roman contexts cattle exceed sheep in almost all phases, but the bone shows evidence for post-burial erosion and the recovery efficiency there may not have been as good as at Hatcliffe Top (the overall fragmentation index was 0.75 at Barnetby as against 0.26 at Hatcliffe) so the reliability of the Barnetby data may not be good enough to use in this manner. In Lincoln (Dobney *et al.* 1996) cattle dominate in all Roman phases from the first-fourth centuries. A dominance of cattle in the Late Roman period has been recorded at other Roman rural sites in Lincolnshire. At Rectory Farm in south Lincolnshire (Rackham and Izzard forthcoming) for example cattle become more abundant than sheep in the middle to Late Roman and Late Roman periods. Pigs are poorly represented at the site, as they were also at Barnetby, but not at Nettleton and Dragonby (Rackham 2013; Harman 1996) and they may have been no more common than the horses. At this date one is inclined to assume the farmstead was a 'commercial' operation, not a subsistence farm, and with probably limited areas for pannage in this part of the Wolds the pigs may have been kept for subsistence (i.e. consumption on the farm) rather than commercial marketing. The occasional bone from a juvenile and immature horse would indicate that horses were kept and bred at the site. Horse bone numbers are relatively high and the fact that they are spread across the site occurring in all five trenches that produced animal bone, along with the bone waste from domestic consumption does perhaps suggest that they were also eaten when their 'working' life was finished. None of the bones were complete enough to measure so their size cannot be calculated, but one acetabular fragment was described as large during recording. The farm may have been breeding horses for sale, as well as their own use. The chicken and probable domestic geese recorded at the site would suggest the keeping of both birds, but no bird eggshell was noted in the sample residues, although this lack is perhaps not surprising if much of the bone is reworked and trampled, the shell may not have survived.

Assessment of the economic role of the animals is made more difficult by the lack of ageing and sexing data. The limited data on the age structure of the cattle indicate the death of several juvenile animals and a significant slaughter of immature and sub-adult cattle which would be consistent with raising the stock for beef with the slaughter of bullocks in their second and third years, while a similar sized group of adults and elderly beasts could be cows for breeding, milkers and draught animals. This is not unlike the late Iron Age and early Roman group from Nettleton (Rackham 2013) and probably indicates a lack of specialisation in the husbandry, the herd being kept to supply a full range of products. The sheep slaughter structure includes a few juvenile and immature animals, but a larger number of sub-adults (using O'Connor's 1991 classifications), these latter presumably being the slaughter of 'unwanted' males or castrates for meat when they have reached an acceptable weight. The skins presumably would also have been used. The juveniles may have been natural deaths or lambs removed from the ewe to leave more milk for a stronger sibling or for human use. There is more evidence for adults and a few elderly sheep, than immature and juvenile, and these may have been both ewes and castrates with wool an important product alongside the breeding ewes and mutton from castrates culled as the quality of their wool fell with age. The elderly sheep are likely to be ewes, which can continue lambing up to ten years and more when they are in good condition. At this age the lambs are likely to be the major product since the quality of the wool is likely to have fallen after seven or eight years of age. There was a tendency for the adult proportion to increase in the Roman assemblages at Nettleton, with an interpretation that wool production became more important (Rackham 2013), but this does not appear to be the pattern at Hatcliffe Top, where, like the cattle, the sheep flock appears to have several roles, which probably included milk production. In contrast to cattle and sheep the pigs have a more limited role, and their primary function is meat production, hence the slaughter of immature animals that attain an acceptable weight in their first or second year. Pigs are so fecund, producing large litters, meaning that few animals are needed to maintain a supply of pork, fat and possibly 'blood' pudding for the household. This is one meat that is traditionally cured because it goes off so quickly. The relatively small number of pigs at Hatcliffe Top might, as discussed above, suggest they helped feed the household and farmworkers rather than being part of any 'commercial' production. This seems likely to be true for the chicken and geese as well, whose numbers are fairly low. While chicken are generally universal on sites where large

assemblages of animal bone have been collected geese are not, but they have been recorded at Dragonby and at Nettleton, also on the Wolds (Rackham 2013). Despite the lack of bird eggshell in the soil samples it seems likely that the eggs of both these species were also exploited, along with the meat and feathers.

8.5 Discussion of the Evidence from the Environmental Samples and the Faunal Remains

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Small scale excavations across a large site obviously create difficulties with respect to how representative the collected assemblages are, and the extrapolation of these results to broader conclusions about the site should always be considered carefully. The numerous ovens identified in Trenches C and D mark these areas for a specific activity, which might be expected to be recognisable from the environmental assemblages, but the other trenches have less diagnostic features and the recovered environmental material from Trench E probably relates in part to an earlier phase of activity than most of the rest of the site, whilst it was also on the likely boundary of the core of the site.

The fill (3531) of potentially one of the earliest site features, a possible posthole [3532], produced virtually nothing. A few very small fragments of charcoal, a single valloniid shell and a few shells of the burrowing snail *Cecilioides acicula*, could be intrusive (a result of worm activity and the burrowing snails). It is possible that this feature is a solution hollow, like other features of this type found around that location of Trench C, rather than a posthole.

Mid- to Late Roman deposits producing environmental evidence were recorded in Trenches A, C, D and E. Six of these were sampled (Table 8.1), one from a layer, another from a ditch and four for ovens, with other contexts of this period producing hand collected animal bone. The samples produced pottery, burnt stone, a little animal bone, oyster shell, a little slag and a few flakes of hammer scale. Although the presence of hammer scale suggests that there may have been iron smithing on the site during this period, flake density is very low and the material could be intrusive from later phases as such small material can move through the soil as a result of bioturbation.

The charred plant remains reflect a general background debris, with glume wheats, mainly spelt with perhaps traces of emmer, hulled barley and possible traces of free-threshing wheat, with traces of

rye and oats probably representing cereal weeds. Cereal remains dominate these small assemblages and in layer (1054) in Trench A the chaff and weed seeds are much more numerous than the grain (Table 8.4a) and probably reflect crop processing nearby in the mid-Roman period.

Ditch [5003] in Trench E, possibly the corner of one of the main enclosures is the only feature to have produced a significant snail assemblage. The lower fill of this recut had a much higher chalk and flint component than other sampled deposits indicating a greater in-wash of the material removed to dig the ditch (presumably from an adjacent bank). In the sampled lower fill (5012) snails of open country/grassland dominate with those more typical or shaded or woodland habitats comprising about 15%. In the sampled middle fill (5007) the shaded element has increased to about 31%, and the grassland element dropped from 73 to 55%. Assuming both deposits formed while the site was occupied this could be interpreted as a hedged enclosure ditch with open grassland on one side and a hedge on the other, the latter becoming more established, throwing more shade and more heavily vegetated at its edges. Snails favouring disturbed ground might have been expected to be more abundant if the adjacent field was ploughed regularly so the field to the NE of the site that slopes down towards the valley floor was probably pasture. If the middle fill of the ditch accumulated after the site was abandoned then the increased woodland elements probably reflect the regeneration of scrub across the abandoned site. The middle fill certainly has a lower density of charred material (Table 8.4a) but both fills have little archaeological debris (Table 8.2). Whilst only a single sheep tooth was recovered from (5012) during hand excavation, assignment of the middle fill to a period of occupation is not problematic given this feature was evidently screened from areas of intense activity by a bank and hedge, and considering the ditch fills at the sampled locations were around 0.35m deep (below the current top of the natural). Hence it is probable the site was occupied when they formed.

The snail assemblages in the later site samples, from elsewhere across the site, are poor. In general the recovered taxa suggest an open grassland landscape around the features, although occasional samples produced shells preferring shaded habitats. Since most of these samples lie within the settlement footprint where there may be a variety of small scale habitats the snail assemblages from these locations have limited value.

The bulk of the samples and animal bone were collected from deposits assigned to the Late Roman period. Apart from the charred remains and the fired

earth and burnt stones archaeological debris occurs at a relatively low density in the samples. The sample from posthole fill (3742) in Trench C produced a few grammes of coal in a quantity suggesting an imported used resource. The concentration of fired earth, some of it probably structural, and burnt stone in Trench D reflects the comparatively large ovens in this trench, and those samples from Trench C that produced small quantities of fired earth (structural in character) and burnt stone derive from oven flues or structures. Large assemblages of charred cereal debris in Trench D associated with two ovens and the oven and flue samples of Trench C clearly indicate these two trenches uncovered the middle to late and Late Roman corn drying areas for the site, also likely at Trench A. The ovens are thought to be external since there is no evidence for buildings (S. Willis pers. comm.) and although some of the oven or flue structures in Trench C are fairly small they could all have been used for 'corn drying' rather than 'domestic' cooking activities, especially bearing in mind the likelihood of truncation through medieval and modern era ploughing. These ovens may have been used for several different functions at different stages of crop processing - drying of harvested glume wheat spikelets before storage, drying of spikelets before dehusking, drying of processed free-threshing wheat and barley grain before storage and drying of grain prior to milling. There is a significant amount of free-threshing wheat among the charred material from Late Roman Oven [4062]/[4058] in Trench D suggesting that this grain may have become more important at the site during the fourth century. Assessing the importance of any one cereal at the site is complicated by the variation in the rich deposits. Whilst Oven [4062]/[4058] had this presence of free-threshing wheat deposits recovered from the feature were dominated by barley; in contrast the nearby (but slightly later) Oven, [4028]/[4086] is dominated by barley with a little spelt wheat, while the deposits associated with (overlying) the possible threshing floor at Trench D are all dominated by spelt wheat. In Trench C middle to late and late Roman oven flues, [3515] and [3745] respectively, both produced samples dominated by barley with some glume wheat. These assemblages appear to reflect some of the final use events of the features, and do not necessarily give an accurate indication of the general importance of each crop. If we look at the features unassociated with the crop processing activities, although much poorer in evidence, these suggest that barley was the most common cereal, followed by spelt wheat and free-threshing wheat. If these samples reflect multiple small scale 'events' rather than specific 'drying' events they may be more representative of the

general importance of each crop type at the site.

With the bulk of the charred cereals deriving from ovens or drying ovens most of these charred plant assemblages must be associated with stages in crop processing rather than 'domestic' food preparation. The low density of charred material in the samples that are not from the ovens or 'threshing floor', and the generally low density of other finds and heavily fragmented bone point to a level of background debris rather than primary rubbish disposal, and suggests that much of the material is in a secondary or tertiary context, and possibly well trampled. It may be that the domestic focus of the settlement lies away from the excavated trenches which effectively examined activity areas.

The bone assemblage indicates that cattle were the most important meat source at the site, with their husbandry likely to have been geared to non-specific production, with milk, beef, traction and skins probably all making a contribution. Local 'towns' at Caistor, Market Rasen, and probably also Lincoln would have been the market for beef, butter, cheeses and skins, and the closest centre in the Late Roman era, namely Caistor, perhaps a market for fresh milk or yoghurts. Cattle make up 74% by weight of the main 'meat' animals but in terms of animals on the farm may have been no more abundant than 1.3 times the sheep numbers. The age structure of the sheep sample perhaps suggests a focus towards wool production, but animals were slaughtered at all ages so the sheep probably also supplied milk, cheese, meat and skins. With cattle and sheep stock almost certainly walked to any markets beef and hogget or mutton could have been walked off site without leaving any 'record', the bones on the site recording just the food eaten at the settlement, which may not always mirror the economic production.

While the cattle and sheep were probably a major part of the farms' commercial production, the less common animals, pig, chicken and goose may have been part of the farms subsistence production, primarily for the farm, its labourers and any local dependants. Local exchange mechanisms may have occurred with the products, of for instance a pig slaughter, being shared with neighbours to avoid loss through perishing and allowing the consumption of fresh meat through the winter without the depletion of the whole of one's own stock. Only the single hare bone and a few bones of fox reflect animals that may have been hunted, and only one of these may have been killed for food, and while the small birds and thrush family could have been caught for food, they carried no evidence for such utilisation and could as easily be natural deaths, or carcasses of cat-caught predation.

Bones from small fish came mainly from Trench D (contexts (4002), (4017), (4024), (4026) and (4076)), mostly from the processed bulk samples, and with two examples from sample (5007) at E. Context (4017) produced several bones. There is a possibility that horses were bred at the site, and their carcasses may also have been eaten. These animals would mainly have been used for riding, but could have been used for pulling various types of carriage. These may have been needed for the transport of goods or people to market, although if there was no hurry the ox cart would have sufficed even for distant Lincoln.

The local topography around the site combined with the soils and some of the botanical and molluscan evidence might point to the Waithe valley sides and floor to the north being used for pasture while the plateau of land upon which the modern farm complex at Top Buildings stands, immediately to the south, may have been the arable fields. Sheep could also have been grazed on calcareous grasslands on the thinner soils on top of the Wolds.

There is a little evidence for 'industrial' activity, iron smithing, at the site reflected in the low density scatter of hammerscale and occasional small fragments of slag. The density of this material is much too low to consider smithing in or adjacent to the areas excavated, but the samples from Trenches A and D both indicate a slightly higher concentration than elsewhere perhaps indicating a slightly closer proximity to any smithy, which may anyway have been an itinerant rather than permanent smith. Although the presence of hammerscale can be used to confidently suggest smithing in the Late Roman period, the scatter of hammerscale in the earlier deposits could have derived from this later activity. There are two or three bone finds that indicate small scale bone working, presumably DIY manufacture of minor objects. A red deer antler tine and a shaved piece of antler cortex both indicate the use of something almost certainly brought/traded to the site, perhaps by an itinerant worker or acquired at a local market. The other fragments of worked bone, a shaft sliver of a cattle metacarpus and a sheep-sized shaft fragment worked to a crude point, could be sourced from the processed carcasses of the farm stock. A worked sheep metatarsus shaft, possibly a knife handle, may have been 'professionally' produced. The heavily chopped fragment of cetacean (whale) bone must have been imported to the site, presumably for the function to which it was put: a chopping block, at least this was its evident final use.

In general the environmental evidence from the site gives a sense of insularity. Apart from the aforementioned bone and the collections of marine shell (fragments from samples and the hand collected

assemblage: see below), all of the identified foodstuffs could have been, and probably were, produced on site, or obtained from the local beck. It is true that our samples may not derive from the primary focus of rubbish disposal at the site, but we might expect them to reflect a fairly complete range of the exploited resources, except perhaps small fish bones and eggshell that may not have survived reworking. This lack of diversity could be argued as an indicator of lack of major status or wealth implying an unexceptional rural farmstead, one of the many that were needed to supply the expanding markets of the fourth century. The slight evidence for an increase in cattle in the Late Roman period, a slight focus on wool production, and the possible introduction of free-threshing wheat as a more significant crop could be responses to an increasing market demand, or indeed command economy in Late Roman Britain.

8.6 Marine Shell from the Excavations

E. M. Somerville

Introduction

A small assemblage of marine shell from excavations at Hatcliffe Top was analysed, dating to the later Roman period. The shell was mainly oyster and can be divided into groups for purposes of study, these groups comprising broadly contemporary sets from Late Roman contexts, with four context groups separated out given their size, plus one general grouping for the remaining shell from across the site. This approach was undertaken on the basis of information supplied by S. Willis. These five groups are as follows. One group (3737) came from a fill in a corn-dryer or oven flue in Trench C and was in a clustered position, possibly representing a single deposit. Three contexts (1004), (3004) and (3010) were fills in Late Roman gullies at Trenches A and C. The shells in (3004) were in a concentrated group; context (3010) was 4.5m distant and on the same alignment as (3004) and likely to belong to the same phase. (3004), (3010) and (3737) were in the same area of the site (Trench C) whereas (1004) was in a different part of the site, to the south at Trench A. In addition there was a scatter of shells across the site, grouped here as “other”. The shell from Trench D was not examined in detail as there were few items, all being from oysters, mainly single examples per context, and most were in a comparatively poor state

of preservation, acidic soils associated with the soot and ash deposits at that trench likely to have had a negative impact; one example of an unopened oyster at Trench D was in comparatively good condition (see Table 8.22 for the listing).

On the west side of the Lincolnshire Wolds is the site of Nettleton which produced a small assemblage of oysters (Somerville 2013) from the Roman period. The dates for the Nettleton settlement run from early Roman to the early-fourth century AD, just before the time-span of the main floruit represented at Hatcliffe Top (S. Willis, pers. comm.). Given this spatial and temporal proximity, the analysis of the Hatcliffe Top oysters presented here follows that adopted for Nettleton.

Methods

Shell from the site had been partially cleaned, and in some instances had been washed. The author's usual method for post-excavation analysis was followed (e.g. Somerville and Bonell 2006). Shell was cleaned where necessary for identification (Fish and Fish 1988) and analysis. Identified shell was sorted and weighed. Only fragments of a size greater than approximately 0.5 cm² were counted and weighed. The minimum number of individuals (MNI) was calculated for each context by taking the greater of the two numbers for sided shells (i.e. valves plus umbos) plus half (rounded down) of any unsided umbos. Where only fragments were present an MNI of 1 was given for the context. Where only unsided umbos were present, the MNI was derived by taking half (rounded up) of their number.

Whole oyster valves were measured for maximum length (from umbo to opposite margin) and maximum width (orthogonal to length) and weighed individually. The shells were systematically scored for the extent of damage due to infestation by the polychaete worms *Polydora ciliata* and *P. hoplura* or by the burrowing sponge *Cliona celata*. In addition the shells were inspected, using a hand-lens, for evidence of the presence of other epibionts, including adhering oyster shell, as well as for damage by predatory molluscs (drillholes). Valves were also inspected for anthropogenic damage, particularly for the location of notches indicating opening. Sided umbos were also inspected for the presence/absence of infesting species and other epibionts. Both valves and sided umbos were aged by counting the growth lines at the umbo. The presence of any distortion of the shell profile was noted for both the whole valves and the sided umbos.

Results

Preservation and distribution of shell

The shell from the site was in reasonably good condition. Some of the oysters from gully fill context (1004) and from the general scatter of shells had a golden-brown colouration, but this did not seem to be associated with any deleterious change to the shell. This colouration is occasionally present in archaeological samples of oysters (Somerville, pers. obs.) perhaps indicating sporadic interaction with iron in the sediment. Table 8.11 gives the summary of the species identified, total weight of shell and MNI.

Oyster was present in all the contexts which produced shell. Mussel was only present as fragments and one unsided umbo in the “other” contexts. From the size and shape of the unsided umbo this is probably *Mytilus edulis*, but it is not possible to completely rule out *Modiolus modiolus*. The cockle fragments could not be distinguished on morphology between *Cerastoderma edule* and *C. glaucum*, and, although the former has a more northerly distribution, they are both known from the coast of East Anglia (Hayward *et al.* 1995). There was a single, slightly worn fragment of shell of *Arctica islandica*.

Whelk shell was found in a number of contexts. This included both the edible *Buccinum undatum* and the inedible *Neptunea antiqua* as well as some fragments which could have come from either of these species. The presence of both these species is considered in the discussion. Table 8.20 gives the distribution of shell from whelks across the site.

In addition to the oyster shell given in Table 8.11, there were a few oyster shells which had a very different appearance, with a dark brown colour and a somewhat worn appearance, with the growth lines being obliterated on the exterior of some shells. They strongly resembled the condition of shell collected from a beach. Some had bryozoa growing internally and two had other oyster shell adhering to the internal surface.

Consequently these were identified as “shell collected dead” and excluded from the analysis of oyster shell from the site, although the significance of their presence is addressed below in the discussion. Table 8.21 gives the distribution of these across the site.

The small size of the oysters (see below) makes it likely that meat weight calculated as $MNI \times 7.5$, following Winder (1980), will produce an overestimate, and the wide range of modern data indicated by Winder (1980) clearly shows the problems with such calculations. Table 8.12 shows the results of this calculation because nonetheless it gives a salutary comparison with the weight of the shell. There is no easy way of estimating meat weight from the size of the shell (Walne 1974), so no attempt has been made to modify this calculation, which can still serve to indicate that the yield from the oysters is relatively small.

The oyster shell showed some differential patterning in terms of survival across the site. As might be expected, the shell from the group of “other” contexts was most fragmented, with the lowest ratio of whole shell to umbos in terms of numbers; the lowest percentage of whole shells by weight and the highest percentage of fragments by weight. Context (3010) had very few shells and therefore no conclusion can be drawn about it. Flue context (3737) and gully context (1004) have the highest ratio of whole shells to umbos in terms of numbers and the highest percentage of whole shells by weight. Context (3004), the other main gully fill context has a much lower survival of whole shells by these measures. The marked difference between (1004) and (3004) possibly means that the taphonomy of these gully fill contexts is not identical.

As is often the case (Law and Winder 2009) there were more whole right than left valves. This can be seen in Table 8.14 and across the entire assemblage there were just over twice as many right valves than left (74 and 35, respectively). However, once the numbers for sided umbos were also considered, the numbers were more even with a total for the

Table 8.11 Weight of shell and MNI for all species

Context/Group	Oyster (<i>Ostrea edulis</i>) (g) [MNI]	Whelk (g) [MNI]	Mussel (g) [MNI]	Cockle (g) [MNI]	<i>Arctica islandica</i> (g) [MNI]
Flue (3737)	916.4 [46]	-	-	-	-
Gully (1004)	585 [31]	15.3 [1]	-	-	-
Gully (3004)	2481.5 [157]	9.3 [1]	-	-	-
Gully (3010)	57.9 [2]	-	-	-	-
All other contexts	1422.3 [103]	34.9 [4]	2.9 [3]	1.9 [3]	2.1 [1]
Site total	5463.1 [339]	59.4 [6]	2.9 [3]	1.9 [3]	2.1 [1]

assemblage of 261 right shells and 204 left shells. In the three largest contexts, there was no evidence for any differential disposal of the two valves. The percentage of right valves was 48% (1004), 56% (3737), and 62% (3004).

Only one right umbo, from context (3737), had partially preserved evidence of damage which could indicate some form of later use, as a hole seemed to be pierced through the shell. A total of 11 valves from across the site had damage to the shell margin which could have come from opening. 10 of these had this at the base of the shell, that is to say, opposite the umbo. The remaining valve had a very clear notch by the umbo.

Size and growth of oysters

Maximum length and weight were obtained for all whole valves. However, some shells were broken in a way which meant that maximum width could not be estimated; this was mainly due to the irregular growth of the shells which meant that it was not possible to predict the shape with sufficient certainty to make an estimate. As usual, not all whole valves or sided umbos could be aged (Table 8.15). Hence the numbers of shells included in the analyses described in this section are not identical. The data on shell length for the whole valves is given in Table 8.14.

Table 8.12 Weight of oyster shell and meat weight estimate.

Context/Group	Weight of shell (g)	MNI	Meat weight (g)
Flue (3737)	916.4	46	345
Gully (1004)	585	31	232.5
Gully (3004)	2481.5	157	1177.5
Gully (3010)	57.9	2	15
All other contexts	1422.3	103	772.5
Site total	5463.5	339	2542.5

There was no significant difference in these measurements for the main groups of shells, omitting (3010) (one-way ANOVA: left valves $F_{3/29} = 0.36$; $p = 0.78$; right valves $F_{3/70} = 0.65$; $p = 0.59$). An analysis of left valves which combined all the three gully fill groups was also insignificant (one-way ANOVA: $F_{2/32} = 0.13$; $p = 0.88$). As the contexts are all from the same period, and there is no reason to separate them as a result of this analysis, data were combined in Figures 8.4 and 8.5 to show the distribution of shell length for right and left valves, respectively, whilst preserving information about the context/group of the valves.

The few very small valves could have come from adhering shells, or they could be spalls. Both right and left valves show a clear mode, of 5cm and 6cm respectively, and an approximately normal distribution. However, both distributions show a marked lack of larger shells.

Both the whole valves and the sided umbos were aged where possible and this combined data is given in Table 8.15. Although the range of ages is similar in the larger groups, the mean age shows some variation and this is borne out in the statistical analysis, again combining all the gully fills to include the small amount of shell from (3010) (one-way ANOVA: $F_{2/350} = 5.76$; $p = .003$). The data are also presented graphically in Fig. 8.6, using percentages to highlight the differences between the groups used in this analysis. This shows that (3737) has a rather flat distribution, and, proportionately, has more old shells than the two other groups which both have distributions closer to normal.

However, there is no statistical difference in the distribution of age when only the whole valves are considered (one-way ANOVA: $F_{2/88} = 1.07$; $p = 0.35$). Therefore the analysis of growth combines the information from all contexts, but separates the data from right and left valves. Fig 8.7 shows how linear growth asymptotes after about 7 years of age. However, shell weight continues to increase, especially for left valves, as shown in Fig. 8.8, although these higher weights for older shells do not look out of line with the general growth trajectory of the shell from the site.

Table 8.13 Survival of shell from different contexts and groups.

Context/Group	No. whole shells	No. umbos (sided and unsided)	Ratio of Whole shells: umbos	Weight whole shells (g)	% wt whole	Wt umbos (g)	% wt umbos	Wt frag (g)	% wt frags
Flue (3737)	30	54	0.56	374	40.8	523	57.1	19.4	2.1
Gully (1004)	21	40	0.53	250.8	42.9	323	55.2	11.2	1.9
Gully (3004)	43	216	0.20	472.8	19.1	1838.9	74.1	169.8	6.8
Gully (3010)	2	2	1.00	43.8	75.7	11.7	20.2	2.4	4.2
All other contexts	13	137	0.09	158.2	11.1	1148	80.7	116.1	8.2

Table 8.14 Summary of shell length for whole valves.

Context/Group	Number of Left valves	Mean length (cm) of Left valves (+/-s.d.)	Number of Right valves	Mean length (cm) of Right valves (+/-s.d.)
Flue (3737)	6	6.43 (+/- 1.47)	24	5.62 (+/- 0.80)
Gully (1004)	8	5.89 (+/- 1.22)	13	5.49 (+/- 0.95)
Gully (3004)	13	6.23 (+/- 0.69)	30	5.39 (+/- 0.70)
Gully (3010)	2	7.3 (+/- 0.0)*	0	-
All other contexts	6	6.2 (+/- 0.70)	7	5.74 (+/- 0.53)

*The two shells had identical lengths

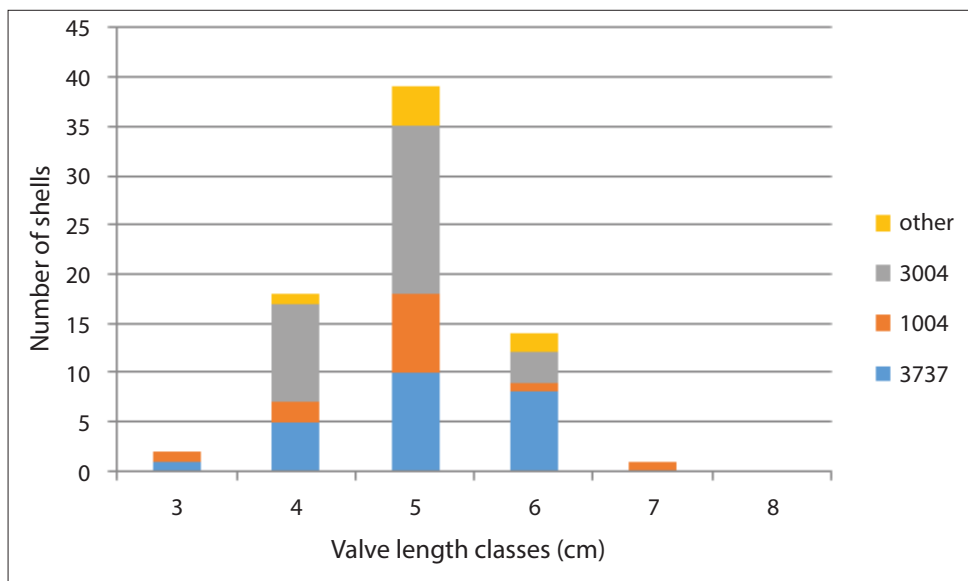


Fig. 8.4 Hatcliffe Top oysters: Distribution of shell length for whole right valves.

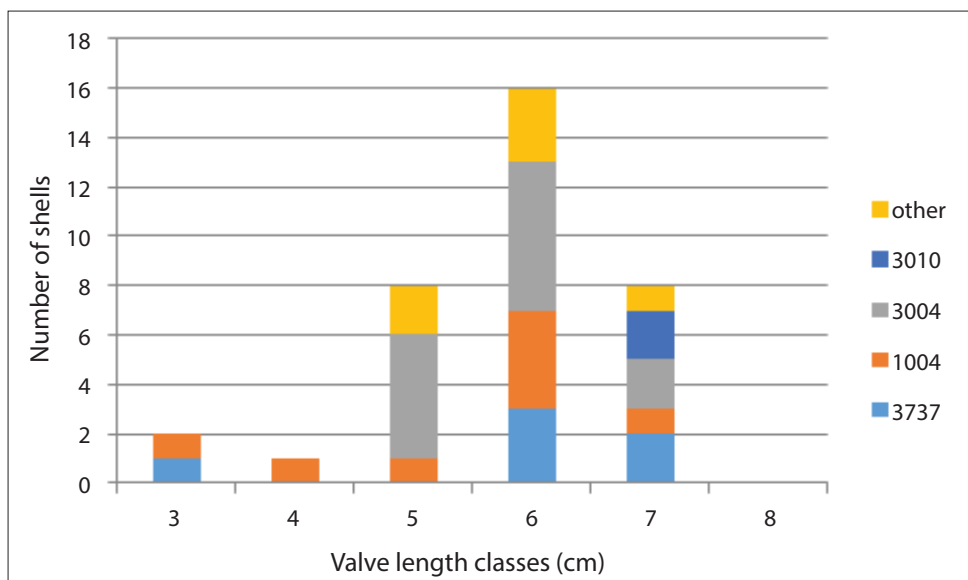


Fig 8.5 Hatcliffe Top oysters: Distribution of shell length for whole left valves.

Finally, in order to see whether this continued increase in shell weight had resulted in some valves becoming unexpectedly heavy for their length the data was replotted as valve length against valve weight (Fig. 8.9). This graph contains more data points because of the difficulties in aging all the whole valves. This analysis emphasizes how the

apparently restricted linear growth of the oysters from Hatcliffe Top, with no valves longer than 8cm, has resulted in a number of valves, particularly left valves, becoming relatively heavy for their length.

Capturing the shape of oyster shells in measurements is challenging. A shape index (maximum length/maximum width) was calculated

Table 8.15 Summary of aging data for whole valves and umbos combined.

Context/Group	Total No. of shells (valves + sided umbos)	Mean age (yrs) (+/- s.d.)	Minimum age	Maximum age	No. of unaged shells (valves + sided umbos)
Flue (3737)	72	7.02 (+/- 2.92)	2	14	29
Gully (1004)	50	6.30 (+/-2.25)	2	10	13
Gully (3004)	230	5.79 (+/- 1.89)	2	14	36
Gully (3010)	3	9.0 (+/- 2.0)	7	11	0
All Other contexts	110	6.41 (+/- 1.89)	1	11	34

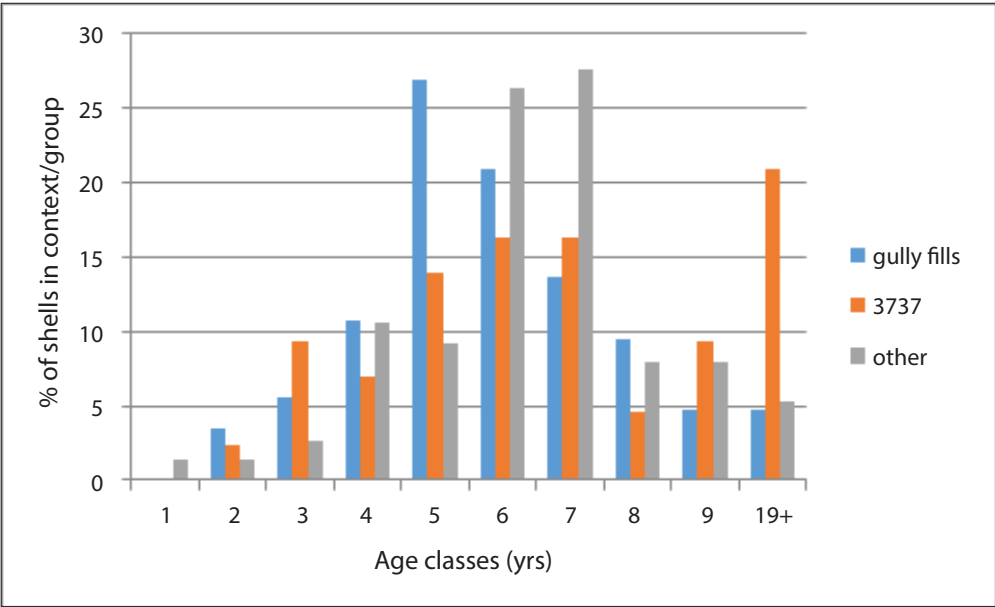


Fig. 8.6 Hatcliffe Top oysters: Distribution of age in the groups of oysters.

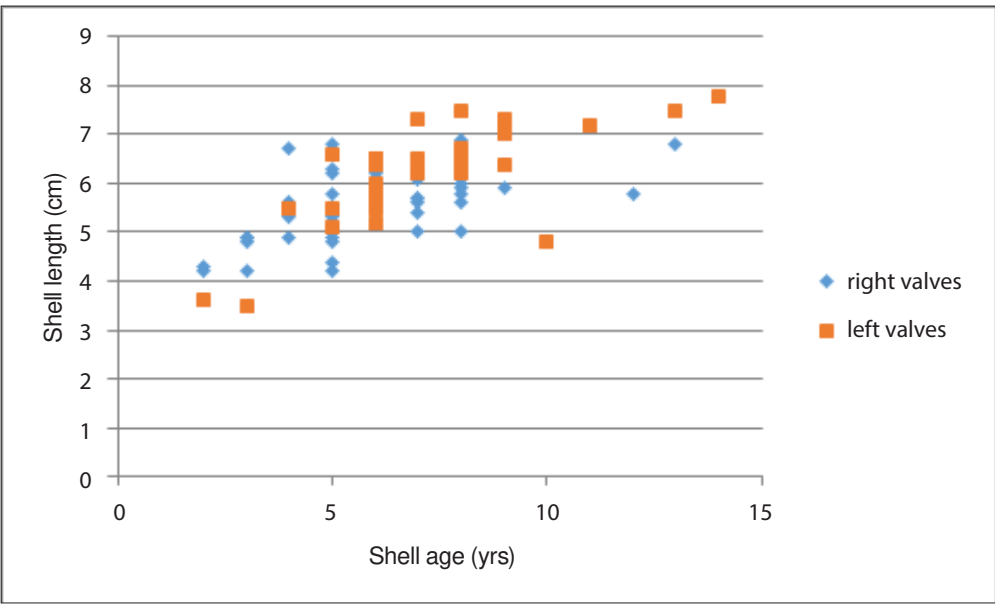


Fig. 8.7 Hatcliffe Top oysters. Growth analysis: Growth of oysters as analysed by the increase in valve length with age (all contexts combined).

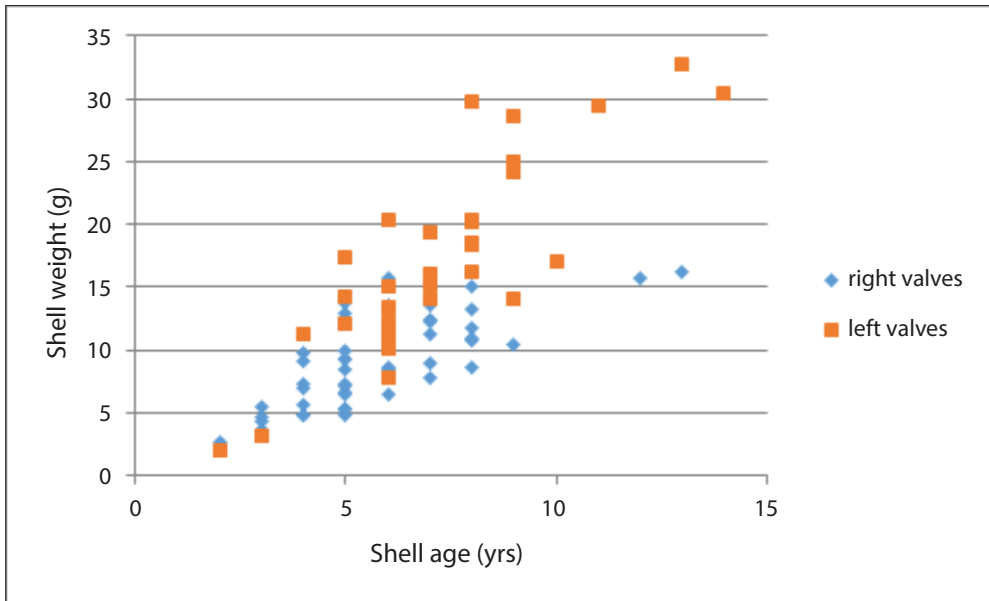


Fig. 8.8 Hatcliffe Top oysters. Growth analysis: Growth of oysters as analysed by the increase in valve weight with age (all contexts combined).

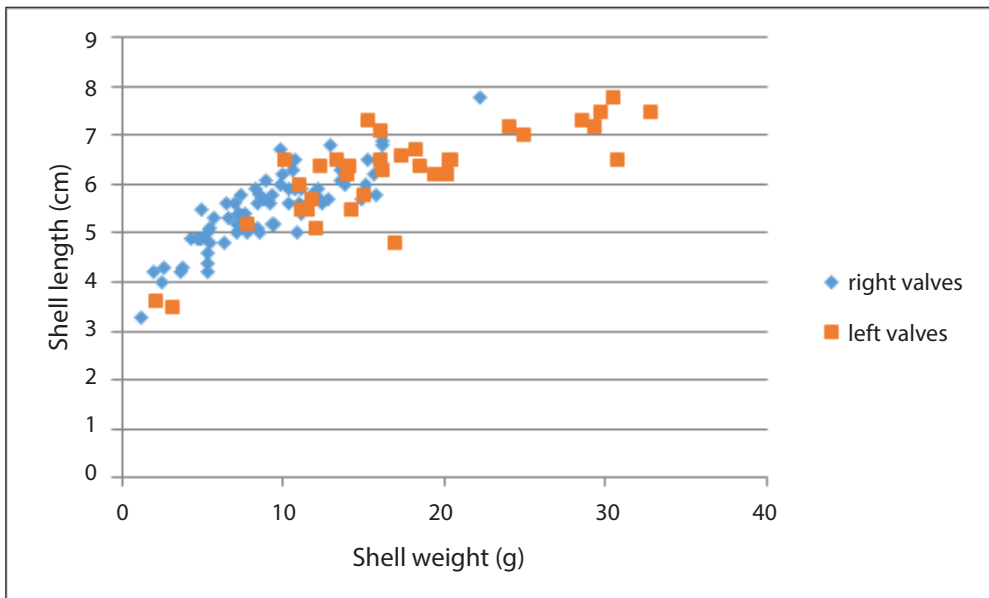


Fig. 8.9 Hatcliffe Top oysters. Growth analysis: Growth of oysters analysed as length:weight for individual valves (all contexts combined).

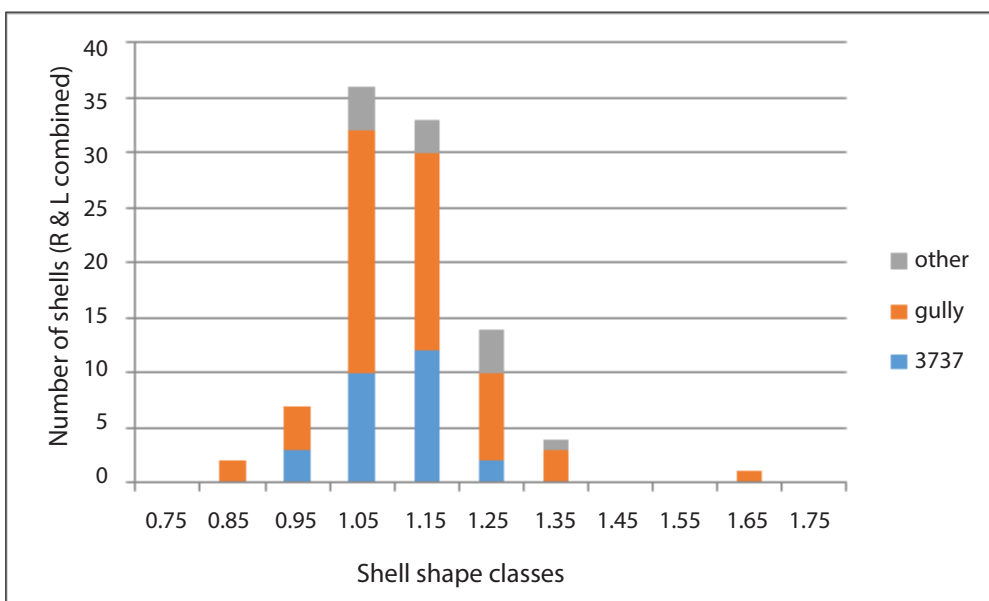


Fig. 8.10 Hatcliffe Top oysters. Shape analysis: Analysis of the shape of whole valves, left and right combined.

for those whole valves where a measure of width was available. This can show whether the oysters are growing evenly or whether they are constrained to grow more in one direction. Fig. 8.10 gives the results of this analysis. The shape of the distribution shows a tendency for shells to be slightly longer than wide, with a marked cut-off for shells which are wider than they are long. The majority of valves (80%) included in this analysis had their widest point toward the base of the shell, their shape was therefore triangular rather than round.

Also investigated was the extent to which the shells deviated from the ideal shape of a flat profile for the right valves and cupped with an evenly curved profile for the left valves. This could be directly observed for the whole valves, but could also be estimated for the sided umbos, since the criterion for determining side was that the muscle scar was visible, which meant that approximately half the upper part shell proximal to the umbo was present. These data are summarised in Table 8.16 as percentages to make it easier to make comparisons across the site. Overall, left shells show more distortion, occasionally to high levels as in context (1004). The shape of distorted left shells was quite variable, with some small shells being almost flat in profile. There were also sometimes small protrusions from and dips in the shell where this had an overall undistorted profile. The distortion seen on the right valves was quite often a bulge upwards, which would have increased the depth within the

shell, allowing a slightly larger oyster to be housed in the shell.

A distinctive, albeit relatively uncommon, aspect of shell morphology at Hatcliffe Top was the way in which the umbos showed evidence for a change in the direction of growth. This was observed during aging of whole valves and sided umbos. There is normally a curve in the way that the umbo grows, especially for the left shell, but in these “turned” umbos there was a point where a later growth line overlaid earlier ones marking an abrupt turn in the direction of growth. The author has not been able to find any comment about this phenomenon in the literature. As Table 8.17 shows, this condition was observed more often in left valves and umbos (10% overall) than in right valves and umbos (4.6% overall).

Epibionts

The epibionts of oysters can be divided into two groups, those which cause damage to the shell and those which encrust the shell. None of the whole valves from Hatcliffe Top showed more than a trace amount of damage from infesting organisms (*P. ciliata*, *P. hoplura*, *C. celata*) as shown in Table 8.18, although 23.4% of the valves showed some trace of infestation. Table 8.19 shows that *P. ciliata* was the predominant infesting organism, with only a very few valves having traces which were more similar to the larger tracks typical of *P. hoplura*.

Table 8.16 Incidence of distortion of valves and sided umbos.

Context/Group	Left valves % distorted	Right valves % distorted	Left umbos % distorted	Right umbos % distorted
Flue (3737)	33.3	50.0	42.3	37.5
Gully (1004)	75.0	53.9	83.3	27.3
Gully (3004)	38.5	30.0	83.8	31.0
Gully (3010)	0	-	-	0
All other contexts	33.3	57.1	49.0	39.1
Site total	42.9	43.2	66.9	33.2

Table 8.17 Incidence of “turned” umbos.

Context/Group	Left valves % turned	Right valves % turned	Left umbos % turned	Right umbos % turned
Flue (3737)	0	0	0	0
Gully (1004)	12.5	0	0	0
Gully (3004)	7.7	10.0	21.6	3.5
Gully (3010)	0	-	-	100
All other contexts	16.7	28.6	5.9	4.4
Site total	8.6	6.8	11.2	3.7

The burrowing sponge (*C. celata*) was not observed on any of the sided shells, but one small fragment from context (2017) (one of the “other” group of contexts) had a pattern of damage which could have been the result of infestation by this species. The adhering shell documented in Table 8.19 was all from oyster, and predominately where spat had settled. In addition, there was a single example of conjoined shells. There were also five cases where left shells came from oysters which had settled and grown within the valves of other oysters. Four of these were umbos and two had to be excluded from analysis because too little of the external surface of the umbo was visible. The fifth whole valve had part of a worn oyster valve attached to the shell.

The incidence of sand tubes is almost certainly an underestimate, despite the care taken in cleaning it was not possible to determine whether a number of inorganic encrustations were in fact the remains of this trace of epibionts. There were a lot of small patches of bryozoa, especially on the left umbos from context (3004). These were overwhelmingly the remains of the base of the calcified walls which surrounded the living zooids. Examination, using a dissecting microscope, of a sample of shells with traces of bryozoa led to the identification of one small patch of intact cases as *Escherella* sp., most probably *E. immersa* (Hayward and Ryland 1979). There were no epibionts or traces of infestation on the two whole whelk shells.

Discussion

The marine shell from Hatcliffe Top has a number of distinctive features. The most notable is the consistently small size of the oysters (cf. Table 8.14). The modal length of excavated left and right valves from Nettleton was 7cm, with an overall average of 7.25cm for right valves and 7.97cm for left valves. The overall size differences between the two sites are significant (one-way ANOVA: Right valves $F_{1/107} = 62.19$; $p < 0.005$; Left valves $F_{1/72} = 63.75$; $p < 0.005$). Whilst this is a very crude comparison, combining all the periods at Nettleton, it emphasises the small size of the valves from Hatcliffe. The Nettleton sample was consistent with the data from other Romano-British and Roman period oysters (Somerville 2013), including the Late Iron Age/early Romano-British site at Redcliff, on the north bank of the Humber, with mean lengths of 7.33cm for right valves and 8.31cm for left valves (Somerville forthcoming). Winder (1992) gives values for Roman period oysters from the east coast in terms of the maximum diameter of the left valve, which can be compared to the values given here for the length. Two samples from Colchester were 8.03cm and 8.13cm, and two from North Shoebury, Essex, were 7.97cm and 8.11cm. Monckton (1995), working on material from Leicester, describes Roman period oysters as being similar to those from Essex. From the south

Table 8.18 Number of whole valves (right and left combined) showing infestation damage.

Context/ Group	No infestation	Infestation class 1 (trace)	Infestation class 2 (Up to 1/3 shell affected)	Infestation class 3 (Between 1/3 and 2/3 shell affected)	Infestation class 4 (More than 2/3 of shell affected)	Infestation class 5 (severe – shell classed as “rottenback”)
Flue (3737)	16	14	0	0	0	0
Gully (1004)	20	1	0	0	0	0
Gully (3004)	39	4	0	0	0	0
Gully (3010)	1	1	0	0	0	0
All other	7	6	0	0	0	0
Site total	83	26	0	0	0	0

Table 8.19 Incidence of shells with infesting and encrusting epibionts (valves and umbos combined).

Context/ Group	<i>P. ciliata</i>	<i>P. hoplura</i>	<i>C. celata</i>	Adhering shell	Sand tube	Bryo-zoa	Drill-holes
Flue (3737)	50%	2.8%	0%	1.4%	2.8%	2.8%	2.8%
Gully (1004)	8%	0%	0%	10%	0%	10%	6%
Gully (3004)	7.8%	0%	0%	5.7%	0%	24.8%	12.6%
Gully (3010)	66.7%	0%	0%	0%	0%	0%	0%
All other	15.5%	0.9%	0%	4.5%	0.9%	9.1%	13.6%
Site total	16.6%	0.7%	0%	5.2%	0.7%	15.9%	10.5%

of England sizes vary from 6.4cm for right valves from Faversham, Kent (Somerville 1995) to 7.8cm for right valves from the second century midden at Fishbourne, West Sussex (Somerville and Bonell 2006).

It is notable that the oysters from Hatcliffe Top fall at or below the permitted size given for harvest in modern oyster fisheries in England of a minimum diameter of 5cm for the south coast and of 6.7cm for the southwest (Davidson 1976). Intriguingly, Philpots (1890), in criticising the use of rings for judging whether oysters are marketable, refers to a variety of “Tom Thumb” or dwarfed oysters which easily pass through a 2 inch (5cm) ring although they could be 5 to 6 years old.

Despite the small size, and the consequent asymptote in growth at a length of about 7cm, other aspects of the growth of the oysters look normal. There is no evidence for the presence of markedly stunted oysters as described by Cole (1956) in the weight data and, although the range of age for both valves and umbos can go up to 14 years, these shells are relatively rare in the assemblage overall, although proportionately more common in (3737). Therefore it seems unlikely that an explanation of the small size could come from some aspect of processing of the oysters and/or taphonomy of the shells on the site resulting in a bias toward preservation of the smaller shells as whole valves and/or partial destruction of larger shells so that these are present as umbos. Excavation damage also seems an unlikely explanation.

Most of the size comparisons made above are to oysters from more southerly locations than Hatcliffe Top. However, a general latitudinal effect would seem unlikely given that the chronologically earlier oyster assemblages from both Redcliff (Somerville 2008) and Nettleton (Somerville 2013) are within the size range for Roman oysters from more southerly sites. Unfortunately, although oysters are recorded from Roman York (Rackham 1976; Berry and Spencer 1980; Hall and Kenward 1990), no measurements of the shells are reported, nor are there reported measurements of the Romano-British oysters from Dragonby, North Lincolnshire (Alvey 1996). Changes in climate seem an unlikely explanation for the differences between Nettleton and Hatcliffe as the Roman period was generally warm, with a downturn occurring in the fifth century AD (Lamb 1995; Dark 2000). It also seems unlikely that earlier exploitation would have completely removed oysters from the best sites for growth, but it is possible that storms could have affected the oyster beds, although the off-shore shoals which protected the coast south of the Humber appear to have remained intact until medieval times (Brigham 2014).

The amount of distortion and the odd phenomenon of “turned” umbos found at Hatcliffe Top indicates that the oysters were growing in somewhat cramped conditions, indicating the exploitation of a wild population. Although a high incidence of distorted shell was found to be the case with the shell from Nettleton (Somerville 2013) the degree of distortion was rarely severe, implying that the Hatcliffe oysters came from a different location or that growing conditions had changed. In contrast to Nettleton, where the majority of valves were as long as they were wide, the shell shape at Hatcliffe Top was shifted towards valves being somewhat longer than wide, again commensurate with the Hatcliffe Top oysters coming from more crowded conditions. For both sites, the exploitation of a wild population is consistent with the morphology of the shell. The same conclusion was drawn for the Late Iron Age/early Romano-British site of Redcliff, where high levels of distortion were found.

The size distribution of the Hatcliffe Top valves may indicate that this exploitation was periodic, although the presence of older shells also indicates that some oysters were left behind. The presence of the collected dead shell may indicate that the gathering of oysters was somewhat indiscriminate, possibly undertaken when the oyster beds were exposed at low tide. The presence of both *B. undatum* and *N. antiqua* could also indicate a lack of discrimination as *N. antiqua* is now considered inedible because of the presence of the neurotoxin tetramine in its tissues (Reid *et al.* 1988; Power *et al.* 2002). However, it should be noted that the concern over tetramine appears to be recent and, in a survey of the whelk fishery Hancock (1967) states that the two whelk species are not separated for market.

The source of the oysters from shallow water is in agreement with the data on infestation as *P. ciliata* was the main infesting species (Cole 1956; Smith 1987; Winder 1992). *P. hoplura* is very rare, which would be expected for the East Coast (Winder 1992), but some traces were also seen on the oysters from Redcliff (Somerville 2008) and Alvey (1996) reports both large and small borings on the oysters from Dragonby. The overall incidence of 16.6% for *P. ciliata* is very similar to the overall figure of 15.3% for excavated oysters at Nettleton (Somerville 2013) and the figure of 17.5% for Dragonby (Alvey 1996). This is at the lower end of the range found on south coast assemblages which range from 18% to 34.3% at Fishbourne (Somerville and Bonell 2003; 2006). However, it should be noted that there is considerable variation in the incidence at Hatcliffe Top with 50% of the shell from (3737) having traces of *P. ciliata*, a figure which is comparable both to the high incidence of 63.3–71.8% found at Redcliff (Somerville 2008) and the 50.1% for Chanctonbury,

West Sussex (Somerville 2001). There was only a single trace of *C. celata* found at Hatcliffe Top, on a fragment of shell. At Nettleton there was an incidence of 2.9% overall, although heavy infestation was seen only on one valve (Somerville 2013). *C. celata* was also found at low levels of 1.1% - 3.7% at Redcliff. Elsewhere, incidence rates for this species are between 1.7% to 5.0% in the case of Fishbourne (Somerville and Bonell 2003; 2006) and an incidence of 3.03% was found at Chanctonbury (Somerville 2001). The overall pattern at Hatcliffe Top of infestation and hence damage to the shell is therefore typical of assemblages of the Roman period. It is notable that the incidence of epibionts is quite different for the three “gully” deposits, possibly indicating that these each originate from a separate episode.

Compared to both Redcliff (Somerville forthcoming) and Nettleton (Somerville 2013), the oysters from Hatcliffe had a higher rate of drill-holes and also more bryozoa, the presence of which was particularly notable in context (3004). The tentative identification of one intact patch of this as *Escherella* sp, probably *E. immersa* is consistent with a shallow water origin for the oysters.

The dominance of oyster in the excavated deposits is not unusual for the Roman period, and in this respect Hatcliffe resembles the earlier site of Nettleton and also both Redcliff and Dragonby. However, the absence of other marine shell is perhaps more surprising at Hatcliffe Top, given its greater proximity to the coast than Nettleton. The presence of oyster at Redcliff (Somerville forthcoming) and

Dragonby (Alvey 1996) was interpreted as relating to dietary shifts at the beginning of the Roman period. It is possible that this cultural significance continues into the later Roman period, with oysters being considered worthwhile bringing back to the site. However, without total excavation, it is impossible to know whether the deposits analysed here are exceptional or the norm for Hatcliffe Top. At York, where there may have been the use of river transport, mussel is found together with oyster in a number of Roman deposits, although oyster predominates where numbers are given, and both cockle and limpet make an occasional appearance (Rackham 1976; Berry and Spencer 1980; Hall and Kenward 1990). In terms of cultural shifts in diet - ‘Romanization’ as it was termed some years back - it is worth noting that Apicius refers to mussels and cockles as well as oysters (Edwards 1984).

Conclusion

The Lincolnshire coast is within the modern distribution of *O. edulis* (Seaward 1982; Wilkinson 2010), and in the nineteenth century there was an oyster fishery based at Cleethorpes (Thirsk 1957, 255). The oyster beds were exposed at the spring tides (Burton 1858). If this exposure was also the case when the inhabitants of Hatcliffe Top were collecting oysters from the coast, the limited time available might explain the indiscriminate collection of oysters and culch.

Table 8.20 The distribution of shell from whelks.

Context/Group	<i>Buccinum undatum</i> (g) [MNI]	<i>Neptunea antiqua</i> (g) [MNI]	Unidentified whelk (g) [MNI]	Total Whelk (g) [MNI]
Flue (3737)	-	-	-	-
Gully (1004)	-	-	15.2 [1]	15.2 [1]
Gully (3004)	9.3 [1]	-	-	9.3 [1]
Gully (3010)	-	-	-	-
All other contexts	-	31.4 [2]	3.5 [2]	34.9 [4]
Site total	9.3 [1]	31.4 [2]	18.7 [3]	59.4 [6]

Table 8.21 The distribution of oyster shell collected dead.

Context/Group	Whole left valves	Whole right valves	Left umbos	Right umbos	Unsidel umbos	Fragments	Weight (g)
Flue (3737)	-	-	1	-	1	-	20.1
Gully (1004)	-	-	-	-	-	-	-
Gully (3004)	-	1	1	1	1	2	72.2
Gully (3010)	-	-	1	-	-	-	12.7
All other contexts	-	-	-	-	-	-	-
Site total	-	1	3	1	2	2	105.0

Table 8.22 The oyster shell from Trench D.

Context	Left valve	Right valve	Left umbos	Right umbos	Fragment	Total Shell	MNI	Weight (g)
4002	1					1	1	4.9
4005					1	1	1	0.1
4008			1			1	1	3.3
4013				1		1	1	2.7
4016	1	1				2	2	9.3
4019	1	1				2	2	14.0
4027	1					1	1	8.7
4036					2	1	1	1.1
4037	1					1	1	3.4
4039	1*					1	1	15.1
4040		1*				1	1	16.7
4043	1	1				2	1+	40.0
4061		2	1			3	3	20.6
4071					1	1	1	2.5
4072	1					1	1	7.5
Totals:	8	6	2	1	4	20	19	149.9

(Key: * - large shell, complete; + - unopened, complete; weight includes soil fill)

The contrasts in the main groups of shell in terms of distortion and of epibionts, especially bryozoa, could be taken to indicate discrete harvesting episodes, possibly from different locations. The data from taphonomy would tend to indicate similarities between context (3737) and context (1004) from the gully fill group, whilst setting the other main gully fill context (3004) apart from these. However, this comparison between contexts does not line up with evidence from distortion or infestation, so that similarities in the processing and disposal of the shell may not relate to their acquisition.

The main question left with respect to the oysters from Hatcliffe Top is why they are so much smaller

than the oysters from the earlier site of Redcliff and, especially, from the Roman levels at Nettleton, which just pre-date the main phase at Hatcliffe Top (from which these samples come). The population being exploited appears to be growing in sub-optimal conditions, and, overall, the oysters appear to have come from a different location than those found at Nettleton. A number of variables might account for this difference. One potential explanation may be change in environmental circumstances related to sea levels, or shifting channels and exposures, as a consequence of dynamic processes around the Humber estuary.

Chapter 9

Finds from Beelsby, 'Field 1-2-3'

Steven Willis

with a contribution by Mark Edmonds

9.1 Background

9.1.1 Location, Topography and History

To the north of Corner Field and the course of the Waithe lies a large field centred on TA 224 023 known now as 'Field 1-2-3' (Figs 1.2, 9.1 and 9.2). This field has produced a cluster of Roman pottery finds reported in this Chapter. These finds suggest occupation or enduring activity, being the nearest known site of the era to the complex at Corner Field. This land, north of the Waithe escape channel to Waterdell (cf. Sections 1.2.3 and 2.2.2), lies within Beelsby parish. The village of Beelsby is located 1km to the west of the field. The field is bounded to the east by the A18 Barton Street, to the south east by several recent domestic properties in the former area of some small fields, to the south by the wooded valley of the Waithe, to the west by two arable fields (named Great Milkings and Bottom Land) and to the north by the Beelsby to Barton Street road. The north-west corner of the field is separated to form an L-shaped grassed area in use for launches and landings of model aircraft. The underlying solid geology is the same as at Hatcliffe Top, with a cover deposit of glacial till. The middle and eastern area of the field has a very gentle north-south ridge (at c.50m OD) while to the west the land falls away to the valley of the old course of the Waithe which lies within this field, to slightly below 30m OD (see Chapter 1). The field today is an amalgamation of three former fields. These are shown on the Tithe Map for the parish of c. 1848 (Fig. 9.2) and remained into the late 20th century (still shown on the 2000/2006 1:25,000 series OS map in slightly more regularized form). The low-lying western side of Field 1-2-3 was known as Low Fields on the Tithe register which records the northern-eastern field at

that time as Lane Barfs and the field to its south as Milking Barfs (Fig. 9.2). These names reflect the topography. Barfs was a Lincolnshire word meaning a long low ridge parallel to low ground (Brogden 1866; Cameron 2001), in this case the eastern valley side of the former course of the Waithe, with the two eastern fields incorporating this rise at their western extreme; the ridge/old valley side continues north of the Beelsby road. At the time of the Tithe apportionment record in the mid-nineteenth century Lane Barfs and Milking Barfs were under arable and Low Fields was grass, probably as it was prone to flooding (cf. Section 1.2.5 and below). More recently Lane Barfs had been used for growing soft fruit. Today the amalgamated field measures c. 860 south-west to north-east by c. 620m. It is normally sown with one arable crop. The field is owned by Mr Jonathan Fenwick who kindly granted permission to access the field for surface examination. The field is under Stewardship management with Natural England.

9.1.2 Previous Records

Speculation that a Roman villa existed in the field is discussed above (under Section 2.2.2.1) in considering the HER record 0095/1/0 (TA 225 027; Fig. 2.1). The entry, from c. 2003, is based upon air photographic evidence listed in the HER as "conjectural" and a mixed collection of items from the field which includes an amount of greyware identified as Roman pottery together with modern material. Possibly the modern material came from around the NGR listed where a former farm track existed until recent times, perhaps surfaced with modern era demolition rubble etc. subsequently 'ploughed in'. Possibly the Roman sherds are from the area of Roman items reported here. The HER sheds no light in that respect. Given their reported composition it is doubtful the finds

are indicative of a former villa. The whereabouts of this material is not known so the identifications and quantities could not be verified. Broad rectilinear cropmarks at the western end of the field are likely to relate to the installation of a sub-surface drainage system as the Waithe Beck used to flood the area of Low Fields, resulting in standing water. Now a drainage pipe system carries water away to the Beck further down its course (pers. comm. Jonathan Fenwick). A walkover in the area of the HER NGR produced no finds. If there had been a villa in Field 1-2-3 then a more obvious surface trace in terms of tiles and building material might be expected. More systematic survey in this large field could help to clarify the actuality.

A pipe trench and easement was opened across the field in 1991 for the Theddlethorpe to Killingholme gas pipeline. This ran approximately north-south across the field on the eastern side of the former Low Fields. The excavation corridor and laying of the pipeline was monitored by Wessex Archaeology. No archaeological evidence was reported from this field and the only find

reported for Beelsby parish was a post-medieval sherd at TA 218 027 (pers. comm. Hugh Winfield). The site of the Roman finds lies on the edge of the higher ground above this corridor. Borehole 12 (Table 1.1) was sunk as a part of this pipeline project (cf. Fig. 9.1).

Two metal items of Medieval date are listed from the area on the Portable Antiquities Scheme (Section 2.2.2.1). No other records or reports for this field were held by the North-East Lincolnshire HER in January 2018.

9.2 The Roman Pottery Concentration in Field 1-2-3

In researching the HER entry 0095/1/0 it emerged that sherds of Roman pottery had more recently been recovered from a location within the field. This group comprised of around fifteen sherds from a location on the higher ground overlooking the former course of the Waithe, mainly focused at c. TA 2236 0243 (Fig. 9.1). The sherds include greyware rims and body fragments

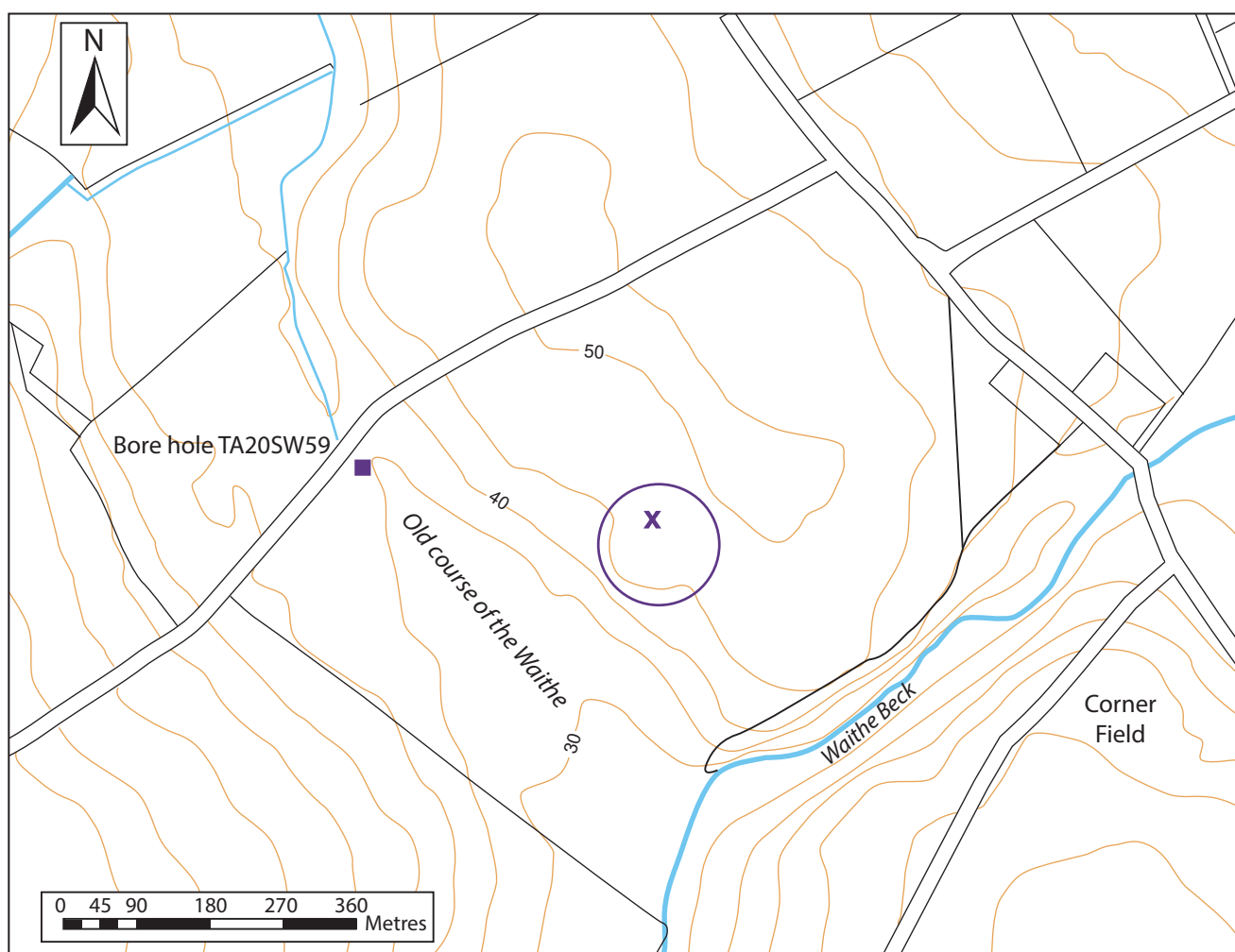


Fig. 9.1 Field 1-2-3 in Beelsby parish, to the north of Hatcliffe Top. The surface collected Roman pottery was recovered from the circled area. The find-spot of the Group VI implement is marked with an X.

in regional fabrics and a samian ware body sherd. The size and condition of these pieces is consistent with that of Roman pottery typically recovered during fieldwalking on the Lincolnshire Wolds. Several sherds were c. 35mm in longest dimension with one rim sherd at least surviving as a larger fragment. These sherds were, however, not available for detailed examination. The find-spot area was examined by the author in September 2017 following deep ploughing and subsequently when the ploughsoil was harrowed and weathered and the circumstances more conducive to the observation of material on the surface of the ploughsoil. The presence of a concentration at this point was confirmed and a group of over one hundred sherds of Roman pottery recovered. The items collected were in a similar condition and of a qualitatively corresponding type range to that of the aforementioned group of fifteen sherds. Other areas of the field surface were examined via a walkover survey but it was not possible to conduct a broader systematic survey of this particularly sizable field.

The area from which the Roman sherds were recovered was quite discrete. It lies to the west of the centre of the present field, on the brow of the flatter plateau top above the cut of the old river course. The location has clear views to the south, west and

north, while to the east the slight rise to the ridge in the eastern part of the field precludes a long distance view in that direction but will have provided some shelter from any wind and weather coming from the east, which in winter might be severe (this ridge being the first higher land west of the North Sea). The area producing the surface finds measures c. 100m by 100m, with a near complete fall-off beyond that extent. Sub-concentrations/clusters occur, particularly on the northern half of this spread, perhaps above extant archaeological features or layers.

Pottery sherds apart other cultural material was limited, and nothing was present of a subsequent date bar rare fragments of modern field drain and brick. This reflects a pattern of limited modern material being present on fields in this area of Lincolnshire, perhaps a function of the low population levels of the last few centuries.

9.3 Prehistoric Artefacts

Three prehistoric lithic tools were collected during the fieldwalking survey in Field 1-2-3. These comprise a Neolithic Group VI implement of Great Langdale tuff (c. 3500-2100 BC), a flint scraper and a flint blade.

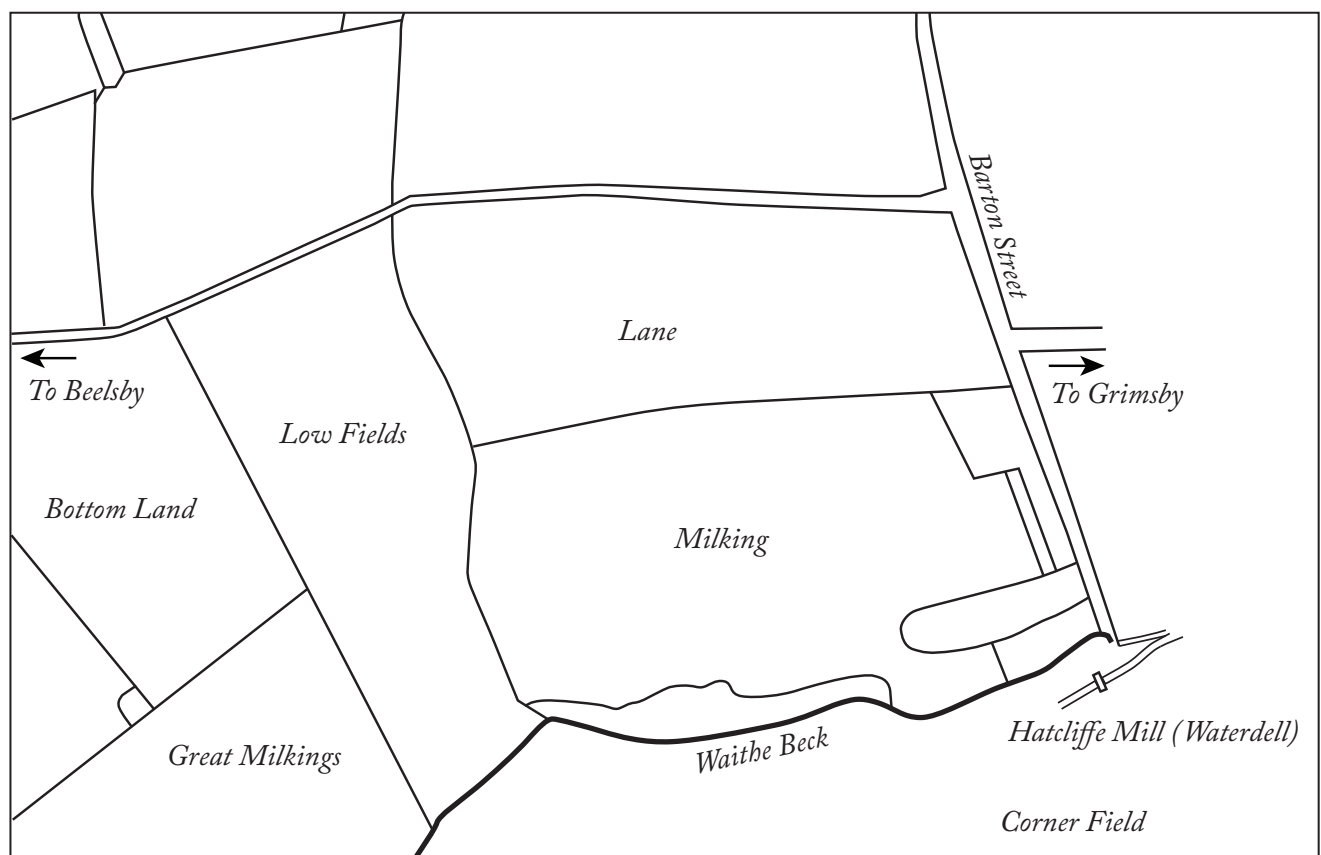


Fig. 9.2 The field arrangement and names as recorded in the Tithe record of c. 1848.

9.3.1 Group VI Ground Stone Implement

Mark Edmonds

A ground stone tool with a fairly complicated history was recovered in the course of the fieldwork (Figs 9.3 and 9.4). Macroscopic inspection suggests it is made from an epidotised volcanic tuff that has its geological source in Cumbria. Identified in the literature as Group VI, axe-blades made from this material are generally assumed to have been made of rock extracted from crags overlooking the Great Langdale Valley. They are found across most of the country, including eastern England, where they occur in some numbers (Clough and Cummins 1979; 1988). Though some were occasionally made from erratics, the scale of deposits in the source area make it clear that the vast majority of the blades made of this distinctive tuff began their lives in the central Fells, somewhere along the line of an 18km long outcrop that threads through and beyond the Langdales (Edmonds 2004).

The current form of the piece reflects extensive reworking and re-use. This is so marked that there is no way of determining the specific form or size of the blade when it was first flaked and ground into shape. What signs there are suggest a relatively large blade with distinctive side facets, a characteristic seen on many axe-blades from Cumbria. Side facets survive on both lateral edges, running the full length on one side; on the other, they have been truncated by flake scars travelling perpendicular to the long axis of the tool. The 'platforms' from which these flakes were struck show traces of subsequent abrasion and rounding. While such traces can be generated by movement and friction on contact points within a haft, the extent of these smoothed surfaces suggests active, if limited, grinding. The side facets on both edges also show signs of having been re-ground longitudinally on a slightly different angle, probably as a feature of the reworking/regrinding of the blade during sharpening or repair.

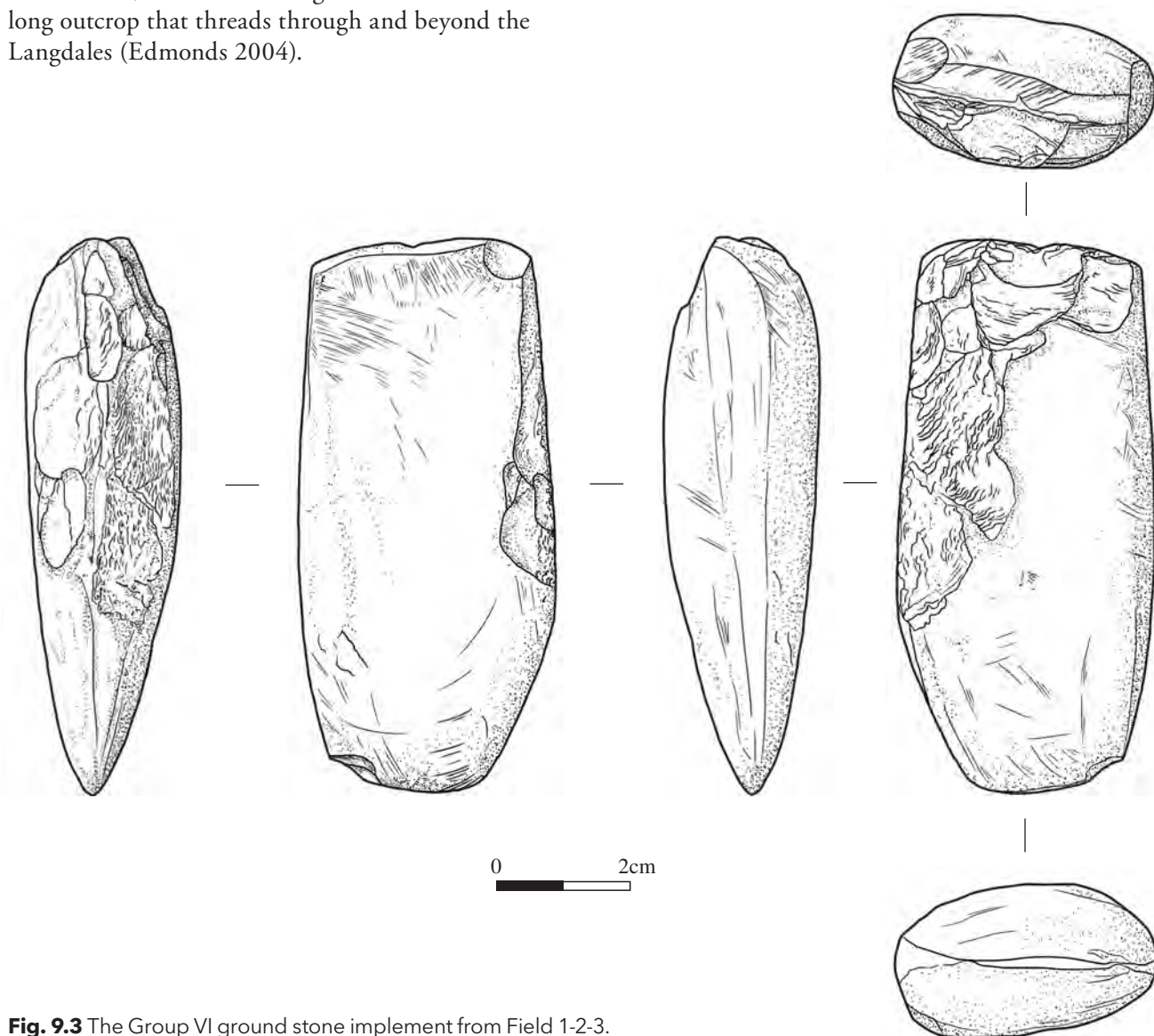


Fig. 9.3 The Group VI ground stone implement from Field 1-2-3.



Fig. 9.4 The Group VI ground stone implement from Field 1-2-3.

The two ends of the piece are markedly different from each other. The wider of the two has been truncated by several flake scars, one or two of them relatively deep. These emanate from the end of the piece. Slight faceting on both principal faces suggest that the cutting edge of the original blade was at this end, though all traces of that original edge have been lost. Breakage, presumably during use, has truncated the blade, so much so that re-flaking and regrinding were required to keep it in use. By the end of its use-life, this end of the blade had been effectively blunted by lateral flake scars and abrasion.

The other end of the piece is rather more distinctive. Symmetrical in cross section, this looks at first glance like a relatively narrow cutting edge, not unlike the cutting edges that we find on more chisel-like blades. However, close inspection reveals that this edge is actually worn and faceted. This may be the result of use, though comparative study suggests that the butt ends of many larger Cumbrian blades have similar facets, so this may be the case here. Small flake scars clustering to one side of this 'cutting edge' might indicate that this end was used. However, these small scars are sharp and angular and not, perhaps, of any great antiquity. What is evident is a marked asymmetry in the taper of the sides in towards this end. This probably indicates extensive regrinding after breakage, which has altered the 'balance' of the piece in plan.

Overall, this implement reflects the extensive reworking of a Cumbrian axe blade, most likely as a

consequence of damage sustained during use. Traces on the more heavily worked of the two lateral edges may reflect the trimming and abrasion of the stone to allow for re-hafting once the original blade had broken. It is possible, but not certain, that this may have been accompanied by a switch in the 'business end' of the tool, the original butt becoming a small chisel-like blade. This might explain the heavy impact fractures and flake scars seen at the other end of the piece. These kinds of scars might have been created by hammering while the opposite end served as a chisel or wedge, hammered into a contact surface at a late point in its life. Such patterns of reworking are known on similar blades across the country. L: 84.5mm; W (max): 39.4mm; T (max): 22.8mm; Wt: 113 grams.

9.3.2 Flint Implements

Scraper

A small end-scraper of similar flint to the blade below and tools B3, B4, B7 and B8 reported in Chapter 5. The platform and bulb are present. The edge has been chipped round and indeed this may originally have been a more rounded scraper but one side has a notch with secondary chipping suggesting an adaptation from a simple round-end scraper. Possibly Neolithic. From the same area as the concentration of Roman pottery reported here. L: 22.5mm; W: 19mm; T: 6.5mm.

Blade

A small blade, even and thin, broken at its distal end; fairly dark grey flint. Fashioned from well-selected, good flaking flint. The back has multiple ripple marks while the front has two facets with a dividing ridge. The blade has snapped with a break at a right angle across the blade. At its bulbar end it has been chipped round to make a fine scraper. Probably Bronze Age (pers. comm. Geoff Halliwell). From same area as the concentration of Roman pottery, on its north-eastern side. L: 37mm; W: 18mm; T: 4.5mm.

9.4 The Collected Roman Pottery

9.4.1 Quantities and Condition

A total of 107 pottery sherds was collected from across the concentration weighing 1228grams with an EVE of 1.18 based on rims (RE). All of the sherds are of Roman date; basic quantified details are given in Table 9.1. The sherds are generally small, weathered and abraded and seem not to include pottery freshly disturbed from underlying layers. Table 9.2 shows the proportions formed by rim, base and body sherds. These proportions show a close consistency between this sample from Field 1-2-3 and the sample from fieldwalking in Corner Field (Chapter 3), comprising a much bigger group, and also a sample from the fieldwalking undertaken in Street Furlongs, Mount Pleasant, as part of the same broader Project (Willis 2103). The latter comprises Squares J2-J5 and Y2-Y5 drawn at random from the large scale survey at that site. This consistency is likely to be a function of the fact that the sherds derive from similar vessel types even though the Field 1-2-3 group has an earlier emphasis within the Roman era than the Corner Field assemblage. Table 9.3 shows the average sherd weights for the Field 1-2-3, Corner Field and Mount Pleasant samples. The averages are very close; they are low by comparison with those for other contemporary sites (cf. Section 6.1.3). The Corner Field group has lower averages than Field 1-2-3 except with regard to bases. The latter may be a function of the small size of the sample from Field 1-2-3 of just eight base sherds. The data emphasize the assiduous collection at Corner Field and how machinated the pottery of that sample is, especially given that there were hardly any thin walled finer wares represented (likely to produce sherds of low weight). The advanced 'brokenness' is also a feature of many of the excavated groups from Corner Field, and this may imply that sherds were already small when they entered the archeological

record, perhaps because, following the breakage of the pottery vessels, they were used for hard-surfacing and so the sherds from the ploughsoil simply reflect this taphonomic aspect. Turning to the Mount Pleasant site its averages are marginally lower than with the Corner Field sample in respect of rims and body sherds, and more so with bases. In this case the earlier emphasis in date at this site and its noticeable consumption of more fine ware/thinner walled vessels could be the key factor resulting in the low averages. Differences in mechanical attrition in the modern ploughsoil could also be at work. However, all told the averages are low for all three samples, with that from Corner Field markedly so when the typology of the pottery is considered.

Table 9.1 Quantitative details of the pottery collected from the concentration in Field 1-2-3.

Quantity:	Number of sherds	Weight (grams)	Average Weight
Sherd type:			
Rim sherds	20	351	17.5
Body sherds	79	765	9.7
Base sherds	8	112	14.0
Totals	107	1228	11.5

Table 9.2 Comparison of the proportions of Roman pottery samples from ploughsoils formed by different sherd types (Central Lincolnshire Wolds Project).

Sample Source:	Hatcliffe Top NELALHS	Beelsby Field 1-2-3	Mount Pleasant St Furlongs Sqs J2-J5 & Y2-Y5
Sherd type:			
Rim sherds	16.6	18.7	15.7
Body sherds	75.7	73.8	77.8
Base sherds	7.7	7.4	6.5
No. of sherds in sample	740	107	216

Table 9.3 Comparison of the average sherd weights (grams) by sherd type amongst Roman pottery samples from ploughsoils (Central Lincolnshire Wolds Project).

Sample Source:	Hatcliffe Top NELALHS	Beelsby Field 1-2-3	Mount Pleasant St Furlongs Sqs J2-J5 & Y2-Y5
Sherd type:			
Rim sherds	14.4	17.5	13.2
Body sherds	7.7	9.7	7.3
Base sherds	27.9	14.0	18.6
Totals	10.4	11.5	9.0

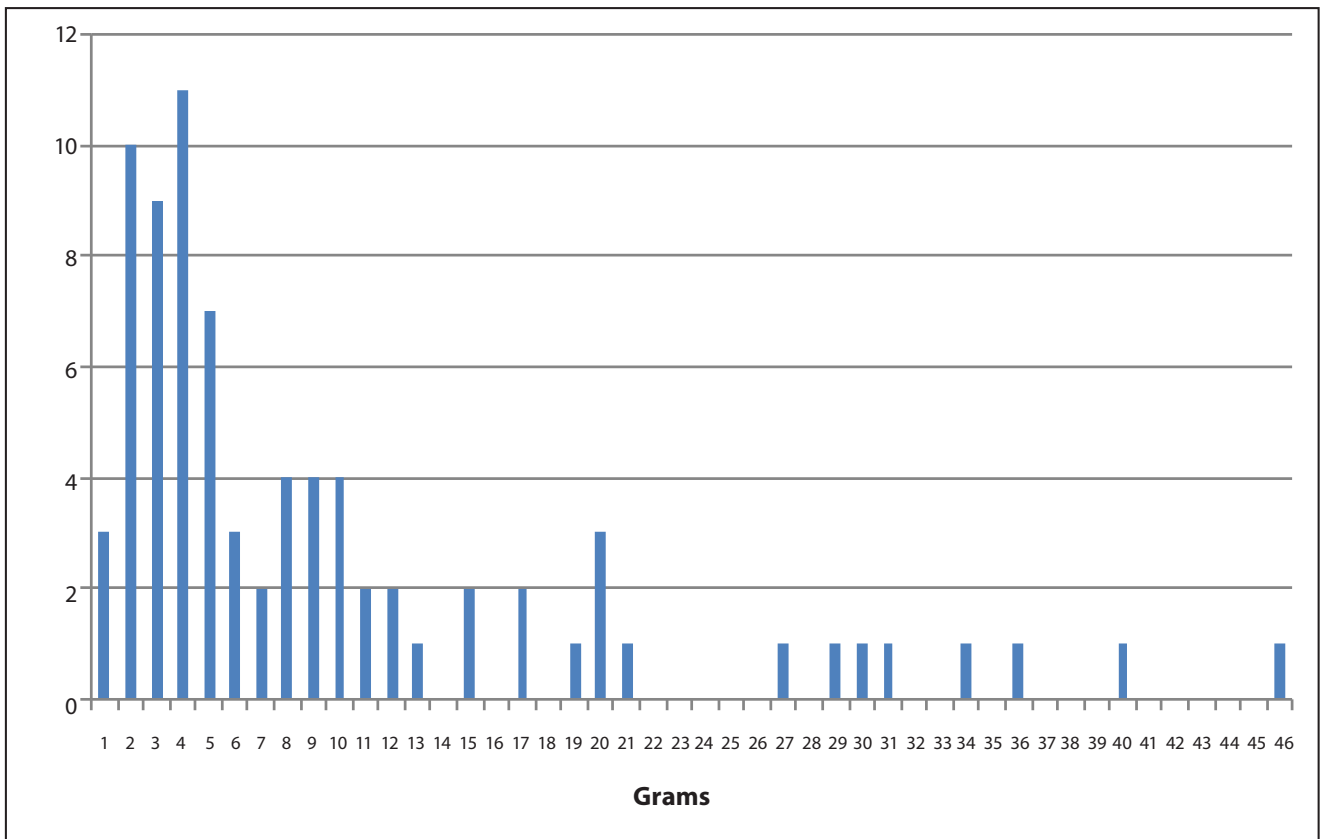


Fig. 9.5 Graph plotting Roman pottery body sherds from fieldwalking in Beelsby Field 1-2-3 in 2017: frequency by individual sherd weight (i.e. number of sherds per gram weight; n=79).

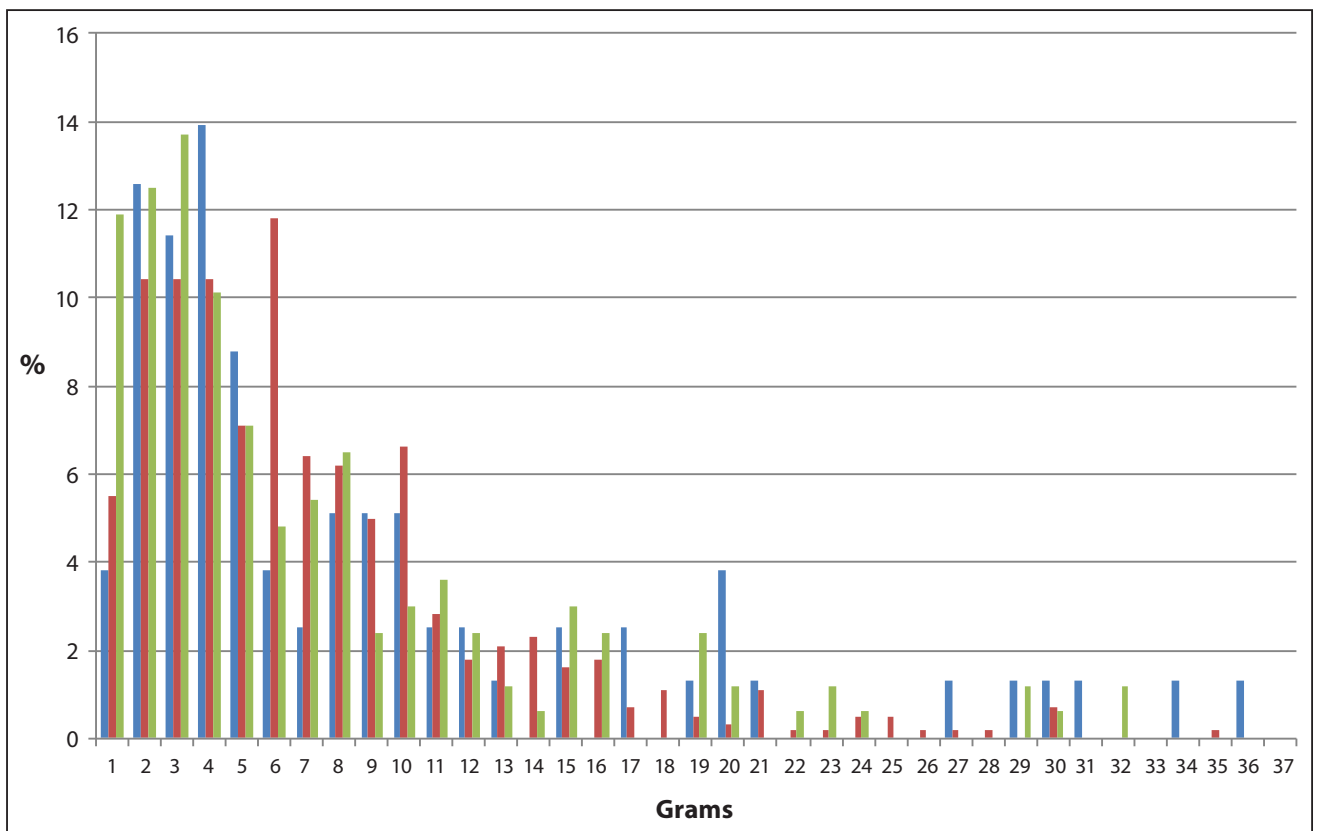


Fig. 9.6 Graph plotting Roman pottery body sherds from fieldwalking in Beelsby Field 1-2-3 (Blue), Corner Field (Brown) and Mount Pleasant, Nettleton and Rothwell (Green): frequency by sherd weights, standardized as a percentage of the total collection per site (i.e. number of sherds per gram weight as a percentage : n=79, n=560 and n=168 respectively).

Establishing average sherd weights by dividing the total weight of an assemblage or group by the number of sherds is a fairly common practice and tends to be instructive where undertaken. However, it can mask trends in actual weights as a few large sherds can significantly boost (skew) averages. Figure 9.5 shows the composition of the sample from Field 1-2-3 by actual sherd weight, that is a graph of the number of cases of individual sherds of an actual weight. The average weight for the rims from Field 1-2-3 is 17.5g, however, 15 of the twenty sherds forming this sample weigh less than the average; likewise 57 of the body sherds weigh 10g or less (the approximate average sherd weight) and only 22 more than that average weight. Hence averaging in this manner can obscure trends in fragmentation.

Figure 9.5, showing the incidence of body sherds from Field 1-2-3 by individual sherd weight, establishes that the most frequent weights are 2-5grams. The peak is at 4 grams and there is a fall away from 4 grams. There is a slight secondary spike between 8-10grams. After 12grams the cases become much more sporadic. Figure 9.6 compares this small sample with that of the larger samples from Corner Field, Hatcliffe Top and Street Furlongs, Mount Pleasant (Nettleton and Rothwell). Given the latter are bigger samples it would be expected that the graph would be smoother with less pronounced peaks and troughs in these cases as there would be expected to be a wider register of weights meaning a wider and moderating spread of values. In fact the plot in Figure 9.6 shows a fairly consistent pattern shared by the samples. Weights 2-4grams consistently show high values with an equal fall at 5grams; immediately thereafter there is a marked difference in the values for the Field 1-2-3 and Corner Field samples at 6 and 7 grams. In turn, after a dip the values for all three sites show a rise or levelling off with Field 1-2-3 and Corner Field displaying closely comparable percentages from 8 to 12 grams. For all three sites there are far fewer sherds of 13 grams or above and from this point the Hatcliffe Top values tail off, with the Field 1-2-3 values being sporadic due to sample size. So, overall there is broad consistency with only two areas of difference. One is the case of a high percentage of sherds at around just 1 gram from Mount Pleasant; clearly the on-site collection was very thorough but the explanation seems to lie in the fact noted above that a greater number of thinner walled types occur at this largely early to mid-Roman roadside settlement site and sherds have been exposed to marked attrition. The second difference is at 6 and 7grams and that may be explained by a more utilitarian emphasis to the Hatcliffe Top pottery;

that is, more vessels with a thicker wall, noting too the higher values for weights 2-4 grams at Field 1-2-3 which may be a function of finer (thinner walled) pottery of some degree. Hence these differences seem likely to be explained in part by variations in the composition of the groups, that is the functional type range of the pottery in use at these sites. It is likely this in part reflects status differences between the three, or may be a product of date, given that later Roman vessels become somewhat thicker in this region as utilitarian types become especially prominent. This could be a particular factor in the case of Corner Field given the strong fourth century emphasis within that assemblage. Data on sherd weights vs wall thickness may be a means to explore this phenomenon if it is noticed elsewhere.

9.4.2 Composition of the Roman Pottery by Fabric and Form

The composition of the Field 1-2-3 group is summarized below following the fabric categories employed for reporting the Roman pottery from Hatcliffe Top.

Amphorae

In contrast to the assemblage from Corner Field which contained no examples of amphora, this group includes a body sherd from a Gauloise 4/Pélichet 47 wine amphora. Early to mid-Roman. Somewhat abraded.

Mortaria

Two sherds of Swanpool oxidized ware either from hemispherical bowls or mortaria. Late third to fourth century. Both somewhat abraded.

Fine wares

Two sherds for samian ware, both Central Gaulish, from Lezoux. One is a small fragment where the form is not identifiable, c. AD 120-140 (based on fabric and firing); the other is from a Drag. 31 dish c. AD 150-200.

Two sherds of Nene Valley type colour coated ware, one a body sherd, quite thick with a red slip over thin grooves; from a comparatively large closed form. The presence of muscovite mica suggests the possibility this item is from Lincoln. The second item is also a body sherd, again quite thick-walled with a brownish exterior slip over wide grooves; from a comparatively large closed form. Mid- to Late Roman.

A greyware rim (GFIN) probably from a beaker in quartz grained tempered ware. Fig. 9.7 Rim A.

Oxidized wares

A micaceous white ware sherd from the floor of a vessel, probably a flagon. Burnt on the exterior.

A body sherd in a fine quartz grain tempered ware, oxidized pale red. This may be an oxidized variant of a greyware cf. GREY1.

Reduced wares

A rim of cavetto type from a wide-mouthed jar of later Roman date (BWM3) in quartz tempered greyware (cf. GREY1-4). Similar to Fig. 6.1 No. 12 from Corner Field, as well as vessels from Burringham Road, Scunthorpe (Darling 2009, fig. 41 nos 4 and 5 in greyware). Fig. 9.7 Rim B.

Fine quartz tempered body sherd from thick-walled vessel, evidently a storage jar (cf. GREY1-4).

Heavy everted rim with rounded terminal and lid-seating in quartz grain tempered greyware (cf. GREY1-4). The rim has been burnt following breakage. Fig. 9.7 Rim C.

Thirty seven essentially featureless body sherds and four base sherds in GREY1-4.

Rim cf. GREY1-4 with pink margins from a dish with straight side and upstanding rim, with slight suggestion of a bead. Probably third to fourth century. Fig. 9.7 Rim D.

Comparatively small jar with rolled rim and short neck in GREY1 with pale grey surface. Probably second century. Fig. 9.7 Rim E.

Everted rim from a jar in GREY1. Fig. 9.7 Rim F.

Flattened rim from a neckless wide-mouthed jar in quartz grained tempered greyware cf. GREY1. Fig. 9.7 Rim G.

Dish with straight side and upstanding rim in GREY1. Probably third to fourth century. The interior is weathered and has lost its surface. Fig. 9.7 Rim H.

Rolled rim (not illustrated) from a wide-mouthed jar in quartz grain tempered greyware cf. GREY1.

Quartz tempered greyware (cf. GREY1), thick-walled with thick white slip on interior.

Very fine quartz grain tempered greyware body sherd cf. GREY1.

Twelve body sherds in quartz grained tempered greyware, cf. GREY1

One body sherd in GREY2.

One body sherd cf. GREY1, 3-4 with really fine quartz tempering

One body sherd in GREY4.

Rim in pale greyware with sparse quartz. This is from a small necked jar with flattened-out and turned rim. Probably second century. Abraded and weathered. Fig. 9.7 Rim I.

Quartz grain tempered greyware body sherd with double exterior grooving, probably from a later Roman wide-mouthed jar.

Quartz grain tempered greyware body sherd, with rouletted band, probably at the vessel girth. Probably from a wide mouthed jar. A vessel from Winterton provides a parallel for the decoration (Rigby and Stead 1976, fig. 88 no. 175).

Small rim fragment (not illustrated) with stubby square terminal in quartz tempered greyware.

Small rolled and undercut rim fragment (not illustrated) in quartz tempered greyware.

SFGR

A brownish-grey heavy rim in South Ferriby Grog Tempered ware. This comes from a large storage jar with lid-seating (cf. Dudley 1949). This example, typically for South Ferriby products, contains a sparse amount of shell-tempering in addition to grog. This is a more 'developed' version of the fabric and a second century AD date is likely (pers. comm. Ian Rowlandson). A parallel for the form occurs at Dragonby (Gregory 1996, 563, fig. 20.26 no. 1327). Fig. 9.7 Rim J.

Heavy base sherd in a grog tempered greyware, probably from a storage jar. Possibly a South Ferriby product.

LCQU/GRRO

Rim (not illustrated) in coarse quartz-gritted ware (LCQU), essentially a fragment from the edge of the rim showing part of the 'lid-seating'. Related items occur at Barnetby le Wold and amongst the assemblages from the Able UK AMEP development, Killingholme, (pers. comm. Ian Rowlandson, cf. Chapter 6). The quartz grains herein are typically 'glassy'; the rim has a white-slip coating.

Rim (not illustrated) in coarse quartz-gritted ware from a lid-seated jar; almost double lid-seated as there are two unpronounced 'steps'. The quartz grains are typically 'glassy' and some are quite sizable (up to 4mm). Mid-later fourth century.

Sherd in coarse quartz grit tempered ware. The quartz grains are sub-rounded and probably include quartzite given the variety of colours. This small sherd has a white slip coating on one surface. Again this is mid-later fourth century.

Small rim fragment (not illustrated) from a lid-seated jar in coarse quartz tempered greyware.

A quartz grain and crushed angular rock fragment (up to 2mm) tempered dark greyware. From a well-fashioned, thick-walled jar.

Five further sherds in coarse quartz tempered greyware, specifically four body sherds and a base sherd.

Native Tradition Wares**IAGR**

A shell tempered ware sherd from near the basal circumference; the shell tempering is ill-sorted and this item could be from a Dales ware type form, but on balance a second to third century date is more likely.

An example in shell-gritted Iron Age tradition fabric. Probably second century AD. Weathered.

An everted rim from a neckless jar, with rounded rim terminal, in IAGR with shell and sparkling fine quartz grain temper. The fabric is fired a dark grey, with a fairly smooth, almost leathery, feel. Wheelmade or finished. The form will be barrel-like and the rim and shoulder are paralleled in vessels from Dragonby and elsewhere in north Lincolnshire (cf. Gregory and Elsdon 1996, fig. 19.35 no.286; Rigby and Stead 1976, fig. 80 no. 18 in an Antonine group). Early Roman, perhaps later first or second century. Fig. 9.7 Rim K.

IAGR2

A grog and shell tempered ware item, coming from the floor of a base with a *ante-cocturam* central piercing through the base approx. 10mm in diameter. The floor is thick at 16mm. Patchy oxidization. Wheelmade. Inclusions have been subject to chemical weathering.

A sherd in quartz grain, grog and shell tempered greyware from a moderately large jar. Developed IAGR2.

IAGR3 type

A rim in grog with quartz grain tempered ware, from a dish cf. Roxby form H (Rigby and Stead 1976, fig. 67 no. 41). Second century. Fig. 9.7 Rim L.

A sherd in grog and quartz grain tempered oxidized ware from a thick-walled vessel, probably a storage jar.

Body sherd in IAGR3 fabric. This is a very thick-walled item (14mm), from a large jar. Probably second century AD.

Two body sherds in grog and quartz grain tempered ware.

Calcareous gritted Later Roman wares

Two sherds from calcite-gritted ware vessels, probably Dales ware type jars.

Illustrated Vessels (Figure 9.7). For fuller details see above under fabric and form listing.

Rim A. Rim probably from a beaker; fine variant of GREY1

Rim B. Cavetto rim from wide-mouthed jar; cf. GREY1-4

Rim C. Heavy everted rim with lid-seating; cf. GREY1-4

Rim D. Dish with straight side and upstanding rim; GREY1-4

Rim E. Small jar with rolled rim; GREY1

Rim F. Jar with everted rim; GREY1

Rim G. Flattened rim from a neckless wide-mouthed jar; cf. GREY1

Rim H. Dish with straight side and upstanding rim; GREY1

Rim I. Small necked jar with flattened, out-turned, rim; pale greyware with sparse quartz

Rim J. Rim from large storage jar with lid-seating; SFGR

Rim K. Everted rim from a neckless jar; IAGR

Rim L. Dish cf. Roxby form H; grog with quartz grain temper

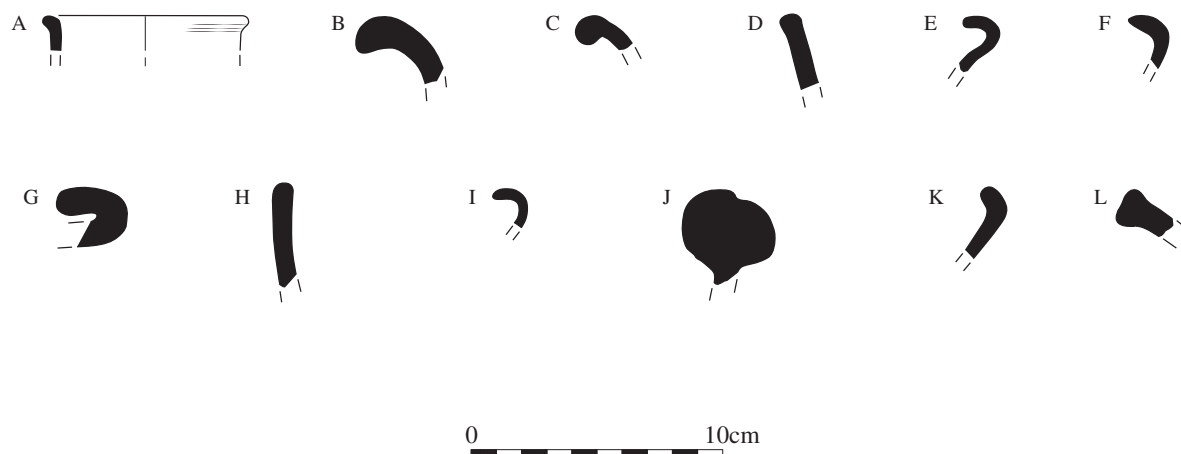


Fig. 9.7 Roman pottery rims from the surface scatter in Field 1-2-3

9.4.3 Discussion of the Roman Pottery

This small assemblage of Roman pottery displays a composition broadly consistent with regional norms. The collection accords with the pottery previously from this location (cf. 9.2 above). It includes items of second to fourth century date. The sample is too small to be able to identify the likely start date of the site. An overlap with the occupation at the Hatcliffe Top site is firmly suggested on typological grounds, although on this evidence the Field 1-2-3- group does not have the same fourth century emphasis, nor the late fourth century floruit, although some types probably date to the mid- to late fourth century. The group is dominated by utilitarian greywares, with jars and bowls prominent, together with some dishes. Quartz grain tempered fabrics are the most common but present too are vessels with grog and shell tempering. Some of the latter have their typological origins in regional Iron Age traditions but often by the early Roman period these occur in wheelmade versions as here, and as seen elsewhere at Roman sites in Lincolnshire. The proportion of finewares and specialized forms (flagons and mortaria) is low, but nonetheless the representation of these types is around normal for a rural assemblage

in this region. The site received fine wares in the second century in the guise of samian ware, while the Nene Valley type colour coated items probably date to the period after samian importation. Sherds in IAGR2 and IAGR3 together with Roxby types present are likely to be second century in date. The earlier Roman era is likewise the period of currency of the Gauloise 4 amphora. Normally amphorae of any kind would be considered an indicator of status and this type carried imported wine. Whether the amphora arrived at the site with its original contents intact or whether it arrived as a useful commodity in itself, as a generic storage and transport container for instance, is not knowable. Amphorae are rare at sites in north-east Lincolnshire and on the Wolds so the representation of this item here is noteworthy; several sherds were recovered at the Mount Pleasant site (Leary 2013) which is probably explained by its slightly elevated status and connections as a roadside settlement. Generally speaking forms occurring amongst this Field 1-2-3 group are well attested regionally and the prominence of quartz tempered greywares is to be expected. Amongst the latter sherds in GREY1 and GREY1-4 fabric are often featureless body fragments due to the fragmentation of this material but some items can be illustrated. There are some examples of GREY4 type which may be from



Fig. 9.8 Looking south-east to Hatcliffe Top from the A18 to Beelsby road. The south-west corner of Field 1-2-3 is on the centre-left and Home Field + and Top Buildings are on the horizon to the right.



Fig. 9.9 View looking south-east across Low Fields (the former course of the Waithe, within Field 1-2-3). The Roman pottery finds came from an area at the cusp of the rise in the centre distance.

the Market Rasen kilns. Rim C is probably from a jar with a double lid-seating and could therefore be from the 'Latest Roman' pottery phase and accordingly therefore contemporary with the Late Roman period occupation at Corner Field. Whilst Late Roman types are present amongst the Field 1-2-3 group there are no diagnostic Dales ware form types present and comparatively few shell/calcite-gritted sherds overall; this may be an index of the date-composition of the group. No surviving calcareous deposits were observed; if they had once existed they may have been leached away, particularly within a ploughsoil environment.

9.5 Roman Ceramic Building Material

There was little presence of Roman brick or tile encountered during the fieldwalking suggesting, there had not been any buildings at the locality of the pottery concentration or its vicinity with tiled roofs etc. Five fragments of apparently Roman CBM were collected (128grams), three being small abraded fragments whilst two larger fragments, with some original surface surviving, are probably from tegulae.

9.6 Discussion

Of the three prehistoric items collected the recovery of two flint tools might be seen to conform to the general pattern on the opposite side of the Waithe Beck in the area of Hatcliffe Top and beyond (cf. Chapter 5), specifically of some moderate frequency, especially by valley sides. That no concentrations were encountered is consistent with the pattern around Hatcliffe Top but more intensive survey of the area besides the old course of the Waithe, which in the post-glacial period probably contained a mis-fit stream and/or periodic standing water, would be instructive.

The Group VI implement, thought likely by Edmonds to originally have been an axe, had a characterful biography. Possibly it had been lost in prehistory in the vicinity in which it was found but it may also have been brought to the location at the time of the Roman period activity, perhaps as a found curio or 'thunderbolt' find (cf. Scott 2013, 23). Stone implements and axes were, however, often deposited at ceremonial and burial sites in the Neolithic, and the two found together in Street Furlongs, Mount

Pleasant (Bishop 2013; cf. above 2.2.1), may be of this association. Fine grained, highly polished axes, of unusual colour, from a distant provenance, and the product of much time investment, are likely to have been valued prestige items, traded in themselves, as well as being highly practical items for primary use in wood-working. Accordingly, deposition at Neolithic burial and ceremonial sites is thought to reflect the significance of the role and associations of such tools within the cultural life of the period (cf. Bishop 2013, 161). It is possible there was a Neolithic focus at this point in Feld 1-2-3 overlooking the old course of the Waithe, for which there is now no surface trace. Geophysical survey might shed light on the possibility of an ancient ceremonial or burial context.

A number of Group VI axes are known from North East Lincolnshire, but this find is the first for some while (pers. comm. Hugh Winfield). Examples of Group VI are known from West Ravendale (Accession LCNMS 78.54), Humberston (LCNMS 80.54 (68)), and Cleethorpes (LCNMS 81.54 (38)) found in 1951, with another from Cleethorpes, found by Taylor Avenue in 1986. Wise stated that there were four known from the Grimsby-Cleethorpes area (Wise 1990, 214, fig. 16.1). The Beelsby implement bears a resemblance to an axe-head from Waddingham, attributed to a Langdale source, found on the west side of the Ancholme Valley near to Ermine Street, reported on the PAS website for North Lincolnshire (NLM-CF9FB4). It is longer and heavier than the Beelsby find. Another is recorded to the north of this find, at Redbourne (Loughlin and Miller 1979, 207, from ploughsoil).

Considering the distribution more widely, axes of generic green stone type from sources in western Britain are well-attested in northern Lincolnshire, around the Humber Estuary and on the Lincolnshire Wolds (Cummins and Moore 1973; Clough and Cummins 1988; Bishop 2013). Hereabouts their recorded concentration is higher than anywhere apart from the Central Fells source area (Cumbria). This presence had led Briggs to suggest they were fashioned from glacial erratics found locally in till deposits in the county, rather than having been fashioned and distributed out of Cumbria or Wales as tools (Briggs 1989). This thesis has, however, long been doubted and is less favoured than the view they were 'traded' direct from the Great Langdale, Wales or Cornwall. To reach the eastern fringe of the Wolds this particular tool had travelled a considerable distance from Cumbria.

Field 1-2-3 warrants further concerted survey and that might provide a better context for the finds listed under HER 0095/1/0. It is unfortunate more

details are not available on that material and that the identifications cannot be verified. Possibly the Roman pottery sherds noted under that HER (assuming their ascription is correct) come from the location reported here; if not then it means there must be a second focus of Roman activity within Field 1-2-3.

The pottery reported here spans the mid- to Late Roman era and is quite typical of settlement assemblages in the region in terms of its range. Accordingly, these finds are consistent with a suggestion that the location could be a small rural settlement. The consumption and ceramic turnover of a small household/s would be modest, perhaps explaining a comparatively low density of pottery in the ploughsoil. A parallel for such a scenario would be the apparent Roman farmstead complex at Mansgate 5 on the western Wolds edge by Nettleton village where similar low density occurs across a site verified by cropmarks and magnetometry (Willis 2013, 8.7.1). Nonetheless, the finds to date from Field 1-2-3 should not be over-interpreted; short of more evidence caution is necessary.

Fragments of coal were also present in the area of the Roman pottery concentration. Their presence in the ploughsoil could relate to introduction in recent times but remains noteworthy given the frequent occurrence of coal in stratified layers at Corner Field, Hatcliffe Top, and at all three other Roman sites excavated as part of the wider Project, at Mount Pleasant, Otby Top and Brookenby. This is particularly so given that cultural material of post-Roman date was absent from the ploughsoil in this area of Field 1-2-3 (bar rare fragments of modern field drain and brick). This is also the case with an oyster valve recovered during the fieldwalking. Again it could be of any date from the late Iron Age onwards but the likelihood it was dislodged from Roman deposits is suggested by this absence of post-Roman cultural material, alongside the wide incidence of oyster shells at the excavated and fieldwalked Roman period sites in and around the Waithe valley. A fragment of dark grey stone, apparently petrified wood, flat and highly polished on one side was also recovered from the area of the Roman pottery concentration and may be from a palette or inlay. In sum these traces alongside the pottery indicate an area in use during the Roman period between the early or mid-second century and the fourth century. With such a tiny amount of CBM in the ploughsoil and no constructional stone any occupation or activity would not seem to have had structures incorporating stone and tile; robbing of such material would have left a signature of small fragments in the ploughsoil. Likewise the site in Corner Field lacked these expensive constructional materials. Any

structures will have been timber framed. The range of finds types of Roman or potential Roman date collected from the surface of the ploughsoil is highly circumscribed. That too, however, was a feature of the surface collections at Corner Field and Mansgate 5 (Willis 2013, 8.7.1) where substantive occupation/activity are attested by other means.

The information gathered thus far suggests the potential of the location and setting for future study. In particular geophysical survey would be instructive and likely to yield clear results ('positive' or 'negative') on this combination of soils and solid geology.

Chapter 10

Finds from Hatcliffe, Round Hill

Steven Willis

with a contribution by David Holman

10.1 Background

10.1.1 Location, Topography and History

To the east and south-east of Hatcliffe village on the south side of the Waithe valley lies the aptly named rise known as Round Hill, centred on TA 217 007 (Figs 1.2 and 10.1). This general location has produced a number of metal finds, including Roman and medieval coins and a likely illiterate curse tablet of Roman date. Many of these items were discovered and collected by Stan Little during metal detecting at the location over a period of years. Details of these items are reported here, though what the finds represent remains a matter for further investigation and discussion. The location lies c. 1.8km south-west of the site at Corner Field, Hatcliffe Top (the latter being readily visible from the area of Round Hill), while the village of Hatcliffe is just 0.4km to the west. The area of Round Hill is kidney-shaped, measuring approximately 1km by 1km. Its highest part is formed by Round Hill itself, to the west, at over 65m OD, with an adjacent area of high land to its east. Again, the underlying solid geology is chalk, with a glacial till cover deposit. The western side of Round Hill overlooks a gorge-like glacial era escape channel, with sharp sides, to its south and west (cf. 1.2.3). To the east the ground slopes downwards more gently to begin with but is bounded by another escape channel which contains Hatcliffe Planation (Fig. 1.4). To the north the ground slopes consistently towards the Waithe Beck (here at c. 33m OD). This slope is bisected by the Hatcliffe to A18 road that forms the boundary to the fields from

which the finds have come. The field to the north of the road, besides the beck, has been in recent years grassland and has not, to this writers' knowledge, been systematically detected (Fig. 10.1). Today the area of Round Hill, as in the 19th century, is divided into several fields. Finds have come from two areas on Round Hill itself, but have mainly been recovered from the area below the summit, to the north-east in the field known today as Middle Field. On the Tithe map of the 1840s Middle Field was the upper of the two fields to the east of Round Hill, separated from it by two micro valleys running approximately north and south. The lower field, north of Middle Field, was known as Lime Pit Field as there are pits cut for the extraction of chalk between it and Thorn Close, the field to its east, and on its western side by Round Hill itself. Today the former Middle Field and Lime Pit Field are combined creating an asymmetric unit (shown on the 2000/2006 1:25,000 series OS), and take their present name from the former upper field. The lower area, from which the finds derive, lies within the former Lime Pit Field, this being sub-rectangular, measuring c. 380m south-west to north-east by c. 245m. Hereafter the location will be referred to as Middle Field following the modern parlance. Both Round Hill and Middle Field are under arable cultivation. The fields are owned by Mr Peter Kirke who granted permission to Stan Little for access to the fields to undertake metal detecting. The resulting finds were collected around the time of the fieldwork at Hatcliffe Top reported above. Although occurring in discrete clusters the finds all come from the area of the landform and to date are the only concentration of Roman period finds known in this stretch of the valley between Swinhope (to the south-west) and Hatcliffe Top.

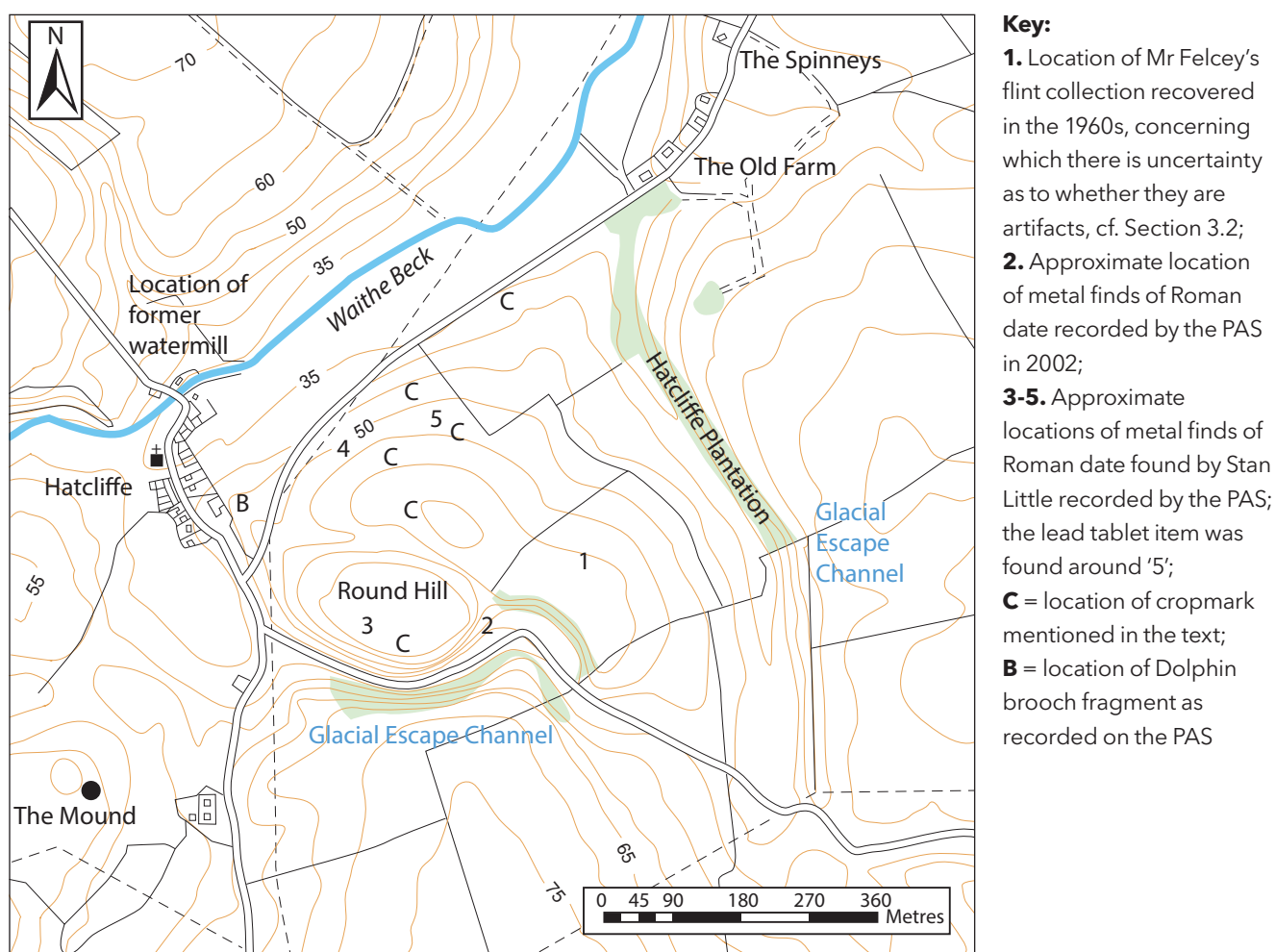


Fig. 10.1 The area of Round Hill in Hatcliffe parish, to the south-west of Hatcliffe Top showing the approximate locations of the finds

10.1.2 Previous Records and Air Photographic Indications

A group of finds (apparently lithics) are recorded from the 1960s collected by Mr Felcey from the field named Far Field on the south-east side of Round Hill (cf. 2.2.1; Fig. 10.1 location 1). No further details are known and these discoveries apart there appear to be no records of finds or material from the Round Hill area other than PAS records from recent years. One of the latter is a part of a Roman Dolphin type brooch found to the north of Round Hill between the Hatcliffe-A18 road and the village (NLM 5493; Fig. 10.1 B).

A group of Roman metalwork finds, including seven coins, are recorded on the PAS as coming from the south side of Round Hill by the Round Hill gorge (TA 219 003, though this may be an approximate PAS location). These finds were recorded in 2002. One coin is an issue of Allectus (AD 293-6), while four date to between AD 330 and 350; another could only

be dated to the fourth century while the remaining coin lacks detail but is dated to AD 388-402, House of Theodosius (NLM 6676-81, 6690). The objects comprise two nail cleaners, a handle from a spoon, a seal box lid, a part of a mid-Roman era bracelet, an eye fibula, part of an early brooch and a knob fragment from a crossbow brooch (NLM 5350-3, 5361, 5585, 5738, 5745). The majority of these coins and some of the copper alloy objects overlap in date with the main floruit at Corner Field, Hatcliffe Top. As the nature of their recovery is not known to this author these finds are not considered further here.

Air photographic evidence is limited. On Round Hill itself there is a suggestion of a circular cropmark c. 25m in diameter that may be the ditch of a Bronze Age round barrow, now flattened (at TA 2175 0035). A smaller circular cropmark is discernible on the western edge of Middle Field, some 20m in diameter (TA 2180 0060), and again may relate to a Bronze Age barrow. There also appears to be a linear feature running parallel with the eastern side of the former Lime Pit Field boundary some 40m into the field (i.e.



Fig. 10.2 View to the west from the east side of Middle Field with the trees in the disused chalk extraction pit by Round Hill showing on the horizon.



Fig. 10.3 View to the west, looking across Middle Field from its north-east corner by the Hatcliffe road.

Middle Field) traceable for most of the distance of that boundary above the lower (northern) section of the field; this may be relatively modern as it seems to relate to the alignment of the Enclosure (field) divisions which endure into the present. In the centre of the field at c. TA 2175 0075 is a sausage shaped feature, defined by what may be ditches, at right angles to the line of the valley and 70-80m in length. A cone shaped feature also approximately perpendicular to the valley with its apex to the north and possibly open to the south occurs towards the north-east corner of the field at TA 2185 0083. This is a more obvious cropmark, traceable for 50m, but the definition is less distinct and it ends abruptly at its southern end, possibly through truncation. There is a possibility that the latter two features are flattened Neolithic long barrows given the scale, form, valley location, topographic positioning and the alignment of the cropmarks (in comparison to, for example, those known from the Hoe Hill – Swinhope area (cf. Section 2.2.1 above; Phillips 1989)). There seem to be no surface indications relating to these cropmarks in Middle Field. Follow-up work is required to advance understanding. That said, these features may have significance in respect of the metal detected finds from the ploughsoil (cf. 10.5). Finally, in respect of the air photographic evidence, in the field known as Thorn Close, east of Middle Field, a large soil and cropmark occurs centrally by the north edge of the field aligned with the Hatcliffe road (c TA 221 011). The central area is amorphous in shape but it is flanked to the west and east by regular linear features suggesting some form of demarcation. The date of this feature is not known although it may be a relatively recent back-filled quarry, noting its proximity to the road and valley slope position, facilitating access and extraction, and was perhaps bounded by an enclosure.

Turning to the recovery of the items reported here, Mr Little undertook the detecting as a routine speculative field visit with no prior expectation of discoveries. He returned to scan these fields on a series of occasions spending many hours detecting. His finds come from four areas, one on Round Hill and three in Middle Field. These items were reported to the field owner and to Martin Foreman, PAS Officer for North Lincolnshire, and are recorded on the Scheme's website. A walkover survey of the field was undertaken by the present author in mid-May 2015, with Mr Kirke's permission. This examination was under Mr Little's direction and confirmed that there is an absence of ancient material visible in the ploughsoil. That is to say no pottery or CBM or other cultural material was observed other than Modern material, despite conditions of excellent visibility. More systematic survey in this large field could be

helpful to advance knowledge, be it fieldwalking and/or geophysical survey. Further metal detecting now seems unfeasible due to the spreading of quantities of green waste on these fields in the last two years that has introduced numerous small non-ferrous modern objects into the ploughsoil.

10.2 Roman Coin Finds

Mr Little showed the finds he had made in the Round Hill area to the present author on two occasions and made available records of the finds up to c. 2014 from the PAS archive and from a typed manuscript, together with information on subsequent finds. These finds have not been systematically catalogued for this Project and here one relies on the following sources. The PAS website currently records 29 Roman coins from the area of Round Hill, seven of which are from the location mentioned above. The remainder were all found by Stan Little over several years. The lists and photos made available to the present author distil to records of 22 Roman coins (in agreement with the PAS record), seven high medieval coins and one Iron Age coin. The condition of several of the Roman coins is markedly similar to that seen amongst the coins collected from Corner Field ploughsoil by Mr Stephenson (see 7.14 above), being heavily weathered and pitted, doubtless due to long exposure in topsoil. David Holman kindly examined the listings, for which images were also available in some cases. From this he produced a firmer list of identifications (including corrections to the PAS list). This is reproduced here as Table 10.1. The PAS website suggests a wider distribution to the coins at Round Hill than the records supplied by Mr Little and personal conversations indicate and the explanation here may relate to the way the data are recorded and plotted by the PAS system and software, which can have a certain spatial vagueness even at the 'researcher level' access. There is a certain clustering in the distribution of the finds, as recorded by Mr Little with clusters in particular in parts of Middle Field (Fig. 10.1). The main points of interest are as follows. Sustained metal detecting, over several years and with varying field conditions, has produced an ensemble of coins particularly of Roman and high medieval date, moderate in number but spanning centuries, from around Round Hill. The earliest coin from the locality is a Corieltavian issue of the regional tribal grouping, being the only example of an Iron Age coin recovered. Mr Little's Roman coins include two Flavian issues followed by three coins dating around the turn of the third century; these are followed by several later

Table 10.1 Coins recovered by Stan Little at Round Hill/Middle Field, Hatcliffe, listed by David Holman

Period	Emperor etc.	Description	Mint	Denomination	Date	Reference	Condition	Weight (gm)	PAS Number	Other ref.
IA	Corieltavi	Boar/horse	*	AR unit	C1 BC	ABC 1785		1.15	NLM-C8DF56	
4	Vespasian	Vesta std. I.	Rome	Denarius	70-71	RIC 37	W	2.46	NLM-B7CA43	NLM 22465
4	Domitian	Fig. std. I.	Rome	As	81-96	*	VW	14.96	NLM-C85284	NLM 22503
10	Septimius Severus	Victory adv. I.	Rome	Denarius	195-196	RIC 64	W	1.70	NLM-B94912	NLM 22491
10	Septimius Severus	Victory adv. I.	Rome	Denarius	196-197	RIC 76	W	3.26	NLM-B96F11	NLM 22493
10	Geta, Caesar	Geta stg. I. Pax stg. I. MP in ex.	Rome	Denarius	199-202	As RIC 18	W	Not known	NLM-2C26C6	-
13	Gallienus		Milan	Antoninianus	260-268	RIC 499 (S)	W	1.81	NLM-C7D384	NLM 22497
13	Salonina	Fig. std. I.	*	Antoninianus	260-268	*	VW	2.14	NLM-B7BB75	NLM 22464
13	Tetricus II	Spes stg. I.	*	Antoninianus	273-274	*	VW	1.23	NLM-B737B2	NLM 22459
14	*	Illegible	*	Barb radiate	c.275-286	*	EW	0.50	NLM-B72261	NLM 22458
13/ 14	Uncertain	Fig. stg. I.	*	Antoninianus	c.260-296	*	EW	0.31	NLM-DD2838	NLM 22583
13/ 14	Uncertain	Fig. stg. I.	*	Antoninianus	c.260-296	*	VW	1.70	NLM-C7F211	NLM 22499
16	House of Constantine	BEATA TRANQVILLITAS	*	AE3	321-323	*	VW	1.29	NLM-C83114	NLM 22501
16	House of Constantine	CAESARVM NOSTRORVM	*	AE3	321-324	*	W	1.98	NLM-C7E241	NLM 22498
16	House of Constantine	PROVIDENTIAE CAESS	*	AE3	324-330	*	VW	1.61	NLM-C805E7	NLM 22500
17	Constantine I	GLORIA EXERCITVS (2)	*	AE3	330-335	*	W	1.47	NLM-B74846	NLM 22460
17	House of Constantine	GLORIA EXERCITVS (2) (copy?)	*	AE3	330-335	*	VW	1.22	NLM-B78614	NLM 22461
17	House of Constantine	GLORIA EXERCITVS (2) (copy?)	*	AE3	330-335	*	W	1.42	NLM-C7BFD7	NLM 22496
17	House of Constantine	VICTORIAE DD AVGG Q NN	*	AE3	343-348	*	W	1.08	NLM-B7A857	NLM 22463
21	House of Theodosius	Illegible	*	AE4	388-402	*	VW	0.60	NLM-68E7B1	NLM 12923
*	Illegible	Illegible	*	AE3	c.260-378	*	EW	3.00	NLM-690701	NLM 12946
*	Uncertain	Illegible	*	AE3	c.330-378	*	EW	1.93	NLM-B79A95	NLM 22462
*	Uncertain	Fig. stg. I.?	*	AE4	c.335-402	*	EW	0.90	NLM-C84455	NLM 22502
M	Richard I	Short Cross class 3 (moneyer: Ricard)	London	Penny	1190-1194			1.04	NLM-C910E4	
M	John	Short Cross class 5	*	Cut halfpenny	1204-1209			0.33	NLM-CB0283	
M	Uncertain	Short Cross	London	Penny	1180-1247			1.12	NLM-B7FCB6	
M	Uncertain	Short Cross (fragment)	*	Penny	1180-1247			0.32	NLM-C975E4	
M	Henry III	VLC Cl. 3a (moneyer: Henri)	London	Cut halfpenny	1248-1250	N.986	SW	0.63	NLM-DD0A93	NLM 22581
M	Edward II	Class 10cf	London	Penny	1307-1310			1.36	NLM-B7E877	
M	Edward II	Class 10cf	London	Penny	1307-1310			1.18	NLM-B959A7	

third century issues, seven mid-fourth century coins and only one likely late fourth century issue (House of Theodosius); the uncertain/illegible coins could supplement the picture slightly. There are seven medieval issues ranging from Richard 1 to Edward II (Table 10.1). This list is of insufficient length to suggest any trends as it could be significantly altered by the addition of just a few more discoveries from the ploughsoil. The Roman coins seem not to closely reflect the pattern seen at the nearby site at Hatcliffe Top although taken together with the finds from by the Round Hill gorge (see above) the low number of radiate issues and presence of a high proportion of Period 16 to Period 17 issues (mid-fourth century before AD 350) implies there could be some date similarity between the activities at the two locations (cf. Chapter 7.14). A stronger sample is needed from Round Hill to verify this possibility. As David Holman states: “What do these coins show? Not a lot, because there simply aren’t enough to derive any reliable conclusions ... small assemblages can easily be misleading” (pers. comm.). It is noteworthy that four of the five earlier Roman coins are silver denarii, while the Iron Age coin is also silver (see below, 10.3). That these coin finds occur alongside other metal items of similar date (see below) is not surprising given the means of recovery.

10.3 A Likely Non-literate Curse Tablet

Amongst the metal items recovered from the ploughsoil in Middle Field was a comparatively large object of folded sheet lead found by Stan Little in early May 2015. The find-spot was close to that of several Roman coins and other metal items of Roman to medieval date (Fig. 10.1). Specifically, the area (a 20m radius) where the tablet was found had also yielded several of the Roman coins, all in fact silver, (the two Severan coins and the Geta issue). The Iron Age coin, also silver, was likewise found around 20-25m from this find-spot. The lead item seems quite possibly an example of a non-literate curse tablet of the Roman era; this is not certain and there is nothing intrinsically dateable about it, but this is suggested as a plausible explanation given its characteristics. It comprises a strip of lead sheet (358 grams), found with both ends of its long axis folded-in and tightly closed. The rounded corners and edges of the item, together with its generally weathered appearance, indicate it is an item of some age that has been abraded within the ploughsoil. As found (folded) it measured c. 80mm by 40mm, with a thickness of c. 16mm. A length on one side

of c. 60mm had been folded inwards and on the other side a length of c. 30mm was likewise folded-in, as if a document were being sealed. The closing was probably achieved by hammering with the aim to keep the item from being opened and thus the content secret. Opened, the strip measures 156mm in length (and would be a few millimetres longer were it completely flat). On the outside and on the interior in particular are impressions where a nail (presumably iron, and potentially the same small nail) has been laid on the lead strip, on its side, and impressed into the lead, evidently hammered down to create deep indents in the softer lead (Figs. 10.4 and 10.5). The impressions average c. 10mm in length and are arranged laterally to the strip and evoke the impression of writing, perhaps intentionally mimicking what one might see on an inscribed defixio. On the interior the majority of the impressions are at right angles to the length of the strip with some, especially at one end, aligned with its long axis. Care has been taken to ensure the impressions respect the margins of the strip. There is likewise linear arrangement to the impressions on the outside. No separate hammer marks are discernible, while the nail or nails, judging from the impressions, show no distortion that might have occurred during the hammering. Martin Henig has seen photos of the find, and notes a parallel with items discussed by Balliot and Symmons (2012), and also points out that in the ‘fixing’ of a curse (*de fixio*) it would often involve ‘nailing-up’ (cf. RIB I nos 6, 7 and 221). Roger Tomlin (pers. comm.) draws attention to the similarity, in respect of the mimicking of writing, with the Bath tablets which have writing-like scratches; these are Tomlin’s so-called ‘illiterate texts’ (Tomlin 1988, nos. 112–16), which he also terms ‘pseudo-inscriptions’. Compared to literate curse



Fig. 10.4 The folded lead strip from Middle Field as found (see text for scale)



Fig. 10.5 The lead strip from Middle Field unfolded, showing the interior (see text for scale)

tablets this strip of sheet lead is thick and heavy but that may well have been the necessary medium for the type of ‘messaging’ it would receive by hammer and nail. The possibility exists that this cursing was intentionally via an indecipherable medium. That is to say the curser may have been literate but chose to incant the message while creating a pseudo-text that the gods would comprehend but which could not be read by mortals. In this way, should the tablet be opened, the cursed would not discover they had been the subject of the divine request for restoration or retribution, and so the curser was insulated from any retaliation or revenge. Some curse tablets have backwards texts probably for a similar reason; they could be read by the gods but the author might be protected, for the message would appear obscure to mortals unless carefully considered.

The discovery of this item follows the recovery of a literate tablet from the Roadside Settlement at Mount Pleasant Nettleton/Rothwell (Willis 2013) reported by Roger Tomlin (Tomlin 2013). Whilst the find reported here was unstratified its immediate association with other Roman items and the presence of a literate curse from nearby (11km away) lends weight to an interpretation that it represents a message invoking the Roman gods by a non-literate (or even literate) believer, wherein the message or magic was recited as the hammer fell upon the symbolic nail. The tablet from Mount Pleasant is apparently the most northerly (literate) tablet so far known in the empire, and this may be the most northerly non-literate example. (I am grateful to Martin Henig and Roger Tomlin for their thoughts on this item. A brief report on this find by the present author appeared in *Epistula* XI in 2016).

Adam Daubney, PAS Officer for Lincolnshire, has drawn my attention to the find of three sheets of lead from the parish of Fulstow, Lincolnshire, two with hammered impressions from coins of Valens (364-378). Fulstow lies in the Marshland, some 11km south-east of Hatcliffe Top. The three finds are on lead sheet and were found by metal detecting in 2007 (LIN 57B091, LIN 57F021, LIN 5806B6). The three items have pierced holes, perhaps for fixing by nails and had been folded-in. The sheet without a coin impression is incomplete. The two with the coin impressions show the coin used to have been either a silver siliqua or copper alloy nummus. Both were folded and closed subsequent to the impression being made and a fold runs through the coin impression in both cases. Daubney sees these items as likely curse tablets (pers. comm.) – perhaps wishing ill on the emperor - rather than relating to counterfeiting practice. The parallels between these finds and the Round Hill item include the lead sheet medium, impressed objects, repeated actions, an absence of indications of writing, general size, folding, and possibly an association with silver.

10.4 Other Finds of Roman Date

A small number of other finds have been recovered through the metal detecting in Middle Field by Stan Little including a Roman silver vessel (NLM C923F1), a copper alloy harness mount (NLM B8D404) and a toilet instrument (NLM B8FD16), both from the same location, and an early Roman brooch (NLM C8D392). The latter came from an area that had yielded several of the Roman coins.



Fig. 10.6 The course of the Waithe Beck (middle distance) as viewed looking north from Middle Field, Round Hill

10.5 Closing Points

There are two curious aspects to these finds from Round Hill/Middle Field. Firstly, that they seemingly occur in the absence of other contemporary cultural material of these periods, such as pottery. Secondly, that there occur quite a number of coins, beyond normal 'background' frequency, together with metalwork, from two separate eras, that is Roman and medieval. (The latter include one or two items recorded on the PAS as Viking or potentially Viking, such as a mount with red enamel found by Mr Little). This could, then, be an example of one of Lincolnshire's 'Persistent Places' or 'Palimpsests' as characterized by Daubney (Daubney 2016), foci in the landscape that for various reasons accrue activity during more than one era. What accounts for this presence of finds is another matter. The proximity of the village of Hatcliffe may provide some clue, as settlement here implies that this setting is a practically

advantageous place in the landscape to locate and undertake various activities, a minor nodal point in natural lines of communication and movement, by the perpetual freshwater of the Waithe. A further point of potential significance is the physical character of the location, forming a distinct landform, bracketed by the Waithe to the north and by the two glacial escape channel gorges, one to the east, and the other to the south and west, that effectively separate Round Hill from its surroundings. The occurrence of the likely curse tablet and a high proportion of silver coins may raise the question as to whether there was a religious or ceremonial focus at this location, possibly dating from the Neolithic if the cropmarks do indeed represent flattened long barrows. Overall, the composition and clustering of these finds is highly noteworthy. An open view, however, as to how these various items came to be in the ploughsoils around Round Hill is advisable at present given there is no other evidence to date for an archaeological site at this location.

Chapter 11

Synthesis and Discussion

Steven Willis

11.1 Hatcliffe Top: Site Location and Human Use

This chapter examines the findings and outcomes of the fieldwork undertaken in the area of Hatcliffe Top and places them within their broader context of the Waithe valley and beyond. Given that the evidence mainly dates to the Roman era that is the principal focus of this chapter.

The lithic finds show the area of Hatcliffe Top was a focus for activity in the Neolithic and Bronze Ages, possibly with some occupation nearby. It is likely that people were moving into and along the valley in the Mesolithic period following the seasonal migration of animals that they would have hunted. The valley will have provided a natural channel, the first higher, better drained, land reached from the east (the present area of the North Sea), comparative shelter and fresh water. Temporary (and revisited) camps may have been established. The tributary valleys of the Waithe seem to have been favoured, as with the micro-valley to the south-west of Home Field+ where several worked flints were recovered, rather than the area of the Top itself or its east facing slopes and rise, now occupied by Corner and Stable Fields; this is probably explained by their exposed aspect. The Group VI tool was also recovered from the side of a tributary valley, though that had been the original course of the Waithe (see Chapter 9). Although the corpus of lithic items recovered in the course of the fieldwork is numerically modest this nonetheless represents one of the largest collections of dated material from the NE Lincolnshire area (pers. comm. Hugh Winfield; cf. Chapter 5) and although north Lincolnshire has a relative preponderance of Cumbrian stone and other Neolithic axes these are only very occasionally found ((pers. comm. Hugh Winfield). Whilst other valley 'entrances' to the Wolds occur to the north and south the glacial gorge channel at Waterdell is relatively striking and distinctive and routes may have led to this access/exit point in

prehistory, a portal to the large Waithe catchment system of some 90km² of the north central Wolds. The change in landscape and sense a passage way to a different environment is likely to have impacted on east-west/west-east human travellers (whilst the A18, on a broad north-south axis, drops and loops in a near 'Alton Towers' fashion in negotiating the Waithe channel at Waterdell). By contrast the old channel of the Waithe to the north-west is less marked, while Hatcliffe Top, on the south side of the gorge is higher than the opposite rise now occupied by Field 1-2-3 (Chapter 9). Conceivably this physical threshold was culturally marked in visible fashion. Whilst there is now no visible trace of such, marking evidence may yet emerge; indeed, the geophysical survey registered an anomaly that may represent the ring gully of a round barrow overlooking Waterdell (Section 11.3.2). Potentially significant in this respect is that four parishes meet at Waterdell (cf. Section 2.3.4). Beyond this threshold it is most likely that settlement and activity foci in the Mesolithic and Neolithic lay further into the Waithe valley and its dendritic system through the Wolds.

A major contribution to understanding the prehistoric period remains the fieldwork coordinated by Patricia Phillips (Phillips 1989a; 1989b). No work specifically targeting prehistoric land use has occurred in the area since, though a new survey of long barrows in Lincolnshire was commissioned recently by Historic England (cf. 2.2.1), and should provide more information on these key monuments, although thereby building up further knowledge on just about the only earlier monument type already comparatively well-known on the Wolds. The pioneering studies of early landscape history undertaken by Phillips and her team in the early to mid-1980s provide a good picture for the sequence around the long barrows of the middle course of the Waithe through the Wolds at Ash Hill and Hoe Hill (cf. Chapter 2). Extensive tree clearance by the early Neolithic was established by Phillips' survey (Phillips 1989a, 181), though this may have

begun earlier with stable grassland in existence prior to and contemporary with the early development of the long barrows; this was consistent with the limited data from elsewhere on the Wolds, as at Giants Hills. Her team's samples suggested subsequent episodes of settled farming (Phillips 1989a, chapter 15). These data are now in need of supplementing with evidence from other Wolds locations using present techniques. More generally information on habitation and economy through later prehistory remain, however, sparse for both the Waithe catchment and the Hatcliffe Top area.

At Corner Field, Hatcliffe Top, there is no firm indication from the finds of activity or occupation before the middle Roman period, and perhaps starting as late as the later third century. The geophysical survey results, however, suggest a sequence of landscape organization, probably for the management of animals, which seems likely to date to before the intensive use of the area of Corner Field in the Late Roman period. Potentially this is of any date between the Bronze Age to early Roman period (see below 11.3); it is possible that some of these features are the proper context of the moderate amounts of second century pottery recovered by this fieldwork, including the samian ware (Section 6.1.6). This system may well have been deliberately developed in relation to the Waithe and to control livestock movement around Waterdell and the Waithe gorge. During the Roman period a co-axial enclosure system, taking its cue from the grain of the landscape, was instated, and in the Late Roman period a dramatic signature through features and artefacts of increased activity and presumed occupation occurs restating and expanding the enclosure system. The advantages for this farming complex positioned at this point in the landscape include access to fresh water, elevation (with, presuming a certain amount of tree clearance, long distance visibility to the north and east to, for instance, the mouth of the Humber), possibilities for mixed farming across environments, and coordination with routeways at a natural node in the landscape. This new foundation may relate to wider settlement reorganization in the Late Roman era. Finds evidence attests to periods of use in the early Medieval era which may have included occupation; however, traces in terms of features for these phases were all but absent. Subsequently, occupation was located elsewhere: further up the valley at Hatcliffe village and at Barnoldby le Beck on the Marshland focused on a glacial outwash ridge from the Waithe. The farm at Hatcliffe Top (Top Buildings) and the present field system are comparatively recent, dating from the era of Enclosure and improvement. Their arrangement, likewise, conforms to the grain of the landscape.

11.2 Project Aims and Research Objectives, and a Review of Outcomes

The Project at Hatcliffe Top was initiated in August 2007 in order to recover more information about a site known to have yielded considerable quantities of Roman pottery from casual surface collections at least since the 1960s. The NELALHS had already undertaken systematic and intensive surface sampling with promising results and a trial excavation targeting the one area where cropmarks were known, in the south-west corner of Corner Field (Chapter 3). The intention of the Project was to establish the character of any stratified remains within the field with the aim to better establish the date of the site, its character, and the nature of preservation of any deposits underlying the ploughsoil (cf. 3.3.1 aim 2). Very little was known of Roman era use of the landscape in North-East Lincolnshire, there having been few systematic excavations (Loughlin and Miller 1979; Bennet 2009; Taylor 2006; NE Lincs HER) in this part of the Wolds or on the Marshland. The eastern fringe of the Wolds and the Marshland beyond had yielded strikingly less cropmark evidence than Jones had recorded in the western Wolds and Wolds margin during his mapping programme (Jones 1998a); this appears to be explained by the glacial till carpet blanketing much of the central and eastern Wolds and its absence or patchy presence on the western side (cf. Jones 1988, 10). Accordingly the eastern side was something of an unknown (cf. 3.3.1 aim 1). It was thought that work on the eastern side of the Wolds would complement the results emerging from Project work already undertaken on the western side of the Wolds from 1998 (cf. Willis 2013). Further, the pottery from the fieldwalking suggested that the site was Late Roman in date with some Saxon/Anglo-Saxon material present. This raised the intriguing question (cf. Section 3.3.1 aim 3) of potential Late Roman occupation at a time when this east coastal fringe was often, by conventional thinking, assumed to be vulnerable to raiding via the North Sea, with the equivalent margins of Kent and East Anglia witnessing a profound abandonment often thought to be a consequence of this vulnerability (Plouviez 1995; pers. comm. Keith Parfitt). Yet, might there also be some continuity into the post-Roman period with this correspondence of pottery dated to these different periods ((cf. Section 3.3.1 aim 4)? The excavations demonstrated stratified deposits and artefactual material extending through the fourth century and including the latest known Roman types of the region in terms of coins and pottery. The results indicate that there is unlikely to have been continuous

occupation from the end of the Roman era occupation (which possibly extended into the early fifth century) but that there were phases of activity in the early Medieval era (cf. below). This early Medieval evidence was largely unstratified coming essentially from artefactual material within later Medieval furrows and the ploughsoil and in some cases as 'top fills' in features cut in the Late Roman period, a phenomenon seen at other locations in the East Midlands (cf. Young, Section 6.2). The work found that preservation of deposits was comparatively good (cf. 3.3.1 aim 7) with earth-cut features to some depth with even surface layering extant at Trenches A and D. The edge of the plateau through the middle of the field and the lip of this plateau as the ground falls away to the east had been eroded and is vulnerable to further attrition (e.g. as seen in Trench F). Elsewhere on the plateau on the western side of the field whilst inevitably centuries of ploughing have to some extent truncated the upper deposits nevertheless the worst impact was caused by Medieval cultivation which scoured furrows through Roman and probably early Medieval remains. The fact that Corner Field is relatively small and has been ploughed by Mr Walker using a small tractor by 21st century standards has doubtless assisted preservation so far. The later Roman complex and main spread of geophysical anomalies was found to extend up to the plateau edge and this point of topographic change was also the point of morphological change. On the whole preservation was found to be reasonably good in terms of survival of subsurface deposits.

Given there were no geophysical survey results to hand and limited cropmark indicators (see above) the initial excavation season in 2007 examined an area (Trench A) where surface pottery had indicated the prospect of sub-surface features. Surviving layers and features were found across the area opened. A geophysical survey of part of the field was completed that season. In subsequent years (especially 2008 and 2010) late harvests and respect for the crop meant trenches could not be opened in the field as there was standing crop and the opportunity was taken to examine a transect (Trenches B and C) along the northern edge of the field and adjacent areas (Trenches E and F) where both the geophysical results, together with the fieldwalking data suggested a concentration of cultural material and earth cut features. Despite these four trenches lying just beyond the area of the geophysical survey this proved a highly informative strategy in terms of Project aims, yielding much by way of artefactual material and stratified deposits. On the other hand the excavation was slowed as it was fully dug by hand and involved spading away hard compact dry uncultivated topsoil by the team. Preservation

was however, somewhat better than in the modern ploughed area in most cases. An early harvest in 2009 saw the freedom to work in a chosen area, targeting a complex of features within the field (Trench D). 2014 and 2015 saw follow-up work particularly extending the transect area (at Trench C). Late harvests and concentration at other sites in the area meant it was not possible to complete the geophysical surveys at Hatcliffe Top until the 2015 and 2016 seasons. Fortunately conditions were highly suitable for metal detecting some of the time (for example in 2009 and 2014, and the autumns of 2015 and 2016). This long term investigation had its advantages and disadvantages in a number of ways and is further indication, if any were needed, that archaeological fieldwork when conducted is often not undertaken in the circumstances of one's ideal choice for archaeological fieldwork has to fit in with other agendas. The Project is thankful to James Walker and his family for permitting access year-on-year. In sum the excavations and surveys provided samples of some size for study in order to meet the initial programme of aims. Opening of larger areas for examination would have been preferable but was not feasible in the windows of time-opportunity available in the farm and University calendars, and indeed everywhere examined produced features and finds with a near 100% sampling strategy. The density of features meant that the excavation team were always fully employed in excavating, instruction and recording through the fieldwork seasons.

It was unfortunate that the 2007 geophysical survey had to be curtailed despite the excellent results. There was then a delay for several years before it was possible to complete the survey of Corner Field in 2016, but this was after the conclusion of the excavation trenching. Had the results been available sooner and had circumstances allowed, trenching in areas of Corner Field where the magnetometry indicated different types of anomalies, potentially functionally different or earlier features to those explored through Trenches A-F could have been seriously considered. By 2016 though it was thought prudent to conclude the fieldwork, given there was no immediate threat to the site, and prepare the findings for full reporting, and the team then concentrated on the site at Brookenby. Much further fieldwork could of course be undertaken at Hatcliffe Top; the results of the work reported here would provide the basis of any future studies. The fieldwork provided opportunities for participation, skills acquisition and training. In sum 36 Society members and local volunteers and 28 students were actively involved on site through the course of the seasons, thereby accomplishing one of the fundamental Project aims (Section 3.3.1 aim 9).

The recovery and examination of sediment samples that might house palaeoenvironmental information with the potential to extend knowledge concerning the evolution of the landscape in and around Hatcliffe Top and the Waithe valley would have been advantageous. James Rackham undertook experimental coring to assess the potential of deposits for palaeoenvironmental sampling along the Waithe valley in the gorge below the site and by Barnoldby le Beck Park in August 2009 and September 2010. It was evident that deposits in the valley bottom were likely to provide little information, comprising no deep deposits and characterized by head deposits above chalk. The excavations encountered only spreads of glacial till over chalk, with no points of post-glacial accumulation within Corner Field other than several solution pipes towards the western end of Trench C evidently filled with the same glacial till as carpeted this part of the site (cf. Chapter 4). The sample taken from one of these pipes proved essentially sterile (context (3531) Section 8.5). Deposits otherwise related solely to the later Roman period together with one or two likely Anglo-Saxon fills and the furrow fills of Medieval cultivation. Accordingly the samples subject to environmental scrutiny and reporting here are all later Roman bar the aforementioned natural; the 29 deposits processed provide a picture of the economy and environment of the period in so far as this was discernible from the capture and survival of land snail, bone and carbonized plant remains, etc. within these soils.

11.3 Hatcliffe Top: Site Morphology

11.3.1 Sources of Information on Morphology in the case of Hatcliffe Top

The morphology of the site at Hatcliffe Top can be comprehended by several means. Firstly the results of the magnetometry (Fig. 3.12) register subsurface anomalies indicative of linear features such as ditches and points features such as pits. The extent, relationship of these features, their alignment, layout in relation to natural topography and the strength of the readings can provide clues as to what may be contemporary through the development of the site. Since the anomalies record magnetic differences in subsurface soils their detection and strength will be dependent upon the nature of the fills of features, which in and around settlements and managed landscapes will vary considerably, even over the same period, as they reflect the spread and

distribution of materials potentially deriving from a great many processes, human and natural. The density of anomalies detected is high, particularly in some areas, and the results indicate the likelihood of generally good survival. One complication in the case of Hatcliffe Top is that remnant furrows from Medieval rigg and furrow cultivation survive below the modern ploughsoil creating streaks in the geophysical plot and in the case of Corner Field these are on two alignments perpendicular to each other and so need to be factored into any reading of the geophysical survey results (cf. Section 3.5). Secondly, evidence from cropmarks often provides indications of 'site-layout' given factors conducive to cropmark generation. In the case of this site the only features that have shown on aerial survey have been the western half of the large oval enclosure and the 'T' junction of linear features (ditches) in the south-west corner of the field (representing anomalies 18, 20 and 21, respectively, detected by the geophysical survey). The latter demonstrate close correspondence between the two methods of detection but raise the question as to why more features in Corner Field and the adjacent fields have not generated cropmarks. The answer may be due to the depth and scale of the features or the nature of their sediment fills (those producing cropmarks being possibly particularly deep or moisture retentive). The glacial till cover deposit over much of Corner Field has evidently not been conducive to cropmark generation; this material was also found to underlie the ploughsoil in the NELALHS trench in 2005 in the general area of the cropmarks and so the cropmarks are perhaps not explained by an exposure of chalk hereabouts below the ploughsoil. Other information on site morphology comes from the records of features recorded within the excavated trenches especially alongside the presence of datable material within the archaeological fills. Also of some significance is the distribution of artefacts in the ploughsoil: especially in this instance pottery sherds and metal finds recovered by metal detecting; plots of the incidence of these ploughsoil finds can be indicative of the site sequence and activity zones. Site formation processes and archaeological data are often complex and the above merely notes salient aspects: other qualifying factors and considerations might be rehearsed but are here acknowledged as the focus needs to be on the case at hand.

The key data in the case of Hatcliffe Top is provided by the magnetometry as this provides a wider view of the occurrence of features, indeed the only spatially extensive one available. The individual features and their understanding were

outlined in Chapter 3 and here, supplemented by other information an interpretation of their sequence is tentatively proposed. Of course the geophysical results only provide information on anomalies in readings and changes; the cause of the anomalies, the character of the 'features' detected, relationships between anomalies and matters of date and sequence are inherently speculative when discussing such findings. The geophysical plot is a guide that needs verification (ideally by excavation). In this case it is apparent from the excavated areas that the plot only shows a proportion of made features and does not represent their complexity and sequence. That geophysical data was only available for approximately the western half of Corner Field during the period when the site was being excavated meant that areas in the south and east of the field with their potentially earlier features (than those excavated in the north-west of the field) were not considered for examination. The finalization of the survey in 2016 was subsequent to the conclusion of the excavations; ideally features ascribed to SMP 1, SMP 2 and SMP 3 (below) would have been subjected to excavation sampling to locate them chronologically and better understand their role. The suggested sequence outlined in 11.3.2 is necessarily speculative; the model of Suggested Morphology Periods (SMP) proposed is grounded in the information available; it is forwarded as a heuristic device, and the actuality remains a matter for investigation.

11.3.2 Interpretative Model of the Sequence and Morphology of the Site

SMP 1. The linear anomalies comprising 1, 2, 3 and 4 (numbers follow those specified in Fig. 3.5), together with, perhaps, 109, may represent a trackway or land division/boundary cutting across the slope of Corner Field from the area of Barton Street (A18) to the higher ground near the modern chalk quarry (Fig. 11.1A). Such a track would make for a gentle ascent meaning the abrupt step rise in the ground level was negotiated at an oblique angle. This seems to be an early feature in the development of the site as it is apparently cut by the ditches 6 and 7, between which anomalies 1, 2, 3 and 4 seem to have been largely obliterated, perhaps by erosion of infilling. The anomalies of 1 and 2 register quite strongly and that may be because hereabouts the ploughsoil immediately overlies chalk. Feature 1 was located and examined within Trench F and produced no dating evidence. A Bronze Age date for their institution is possible. Perhaps also of this

period is the semi-circular anomaly 51 on the cusp of the higher ground to the west, above the step (as the 45m contour line shows in Fig. 11.1A). This might be the remains of a partially surviving ring ditch of a round barrow, with the eastern half lost through erosion as this point by the step in the topography has been subject to denudation, the step probably representing a buried former sea-cliff (cf. Section 1.2.1, Fig. 1.5). The precise location, just above the natural break of slope, and therefore visible from the Marshland etc., would be fully consistent with the choices made in siting such significant monuments in the Bronze Age (cf. Jones 1988, 17). On the Wolds and elsewhere, round barrows can occur singularly or in small groups (Willis 2013, 1.7), often placed near locations where people will be moving through the landscape or by boundaries, as apparently here. It is possible that some of the features ascribed to SMP 3 are contemporary with the features allocated to this morphology period but this is unlikely as they register much stronger anomalies indicating the probability of a culturally different signature in their filling.

SMP 2. The sinuous linear anomalies 6 and 7 cross those of SMP1 and appear to funnel inwards at the point of the steep slope ascending/descending the natural step in Corner Field (Fig. 11.1B). On the western plateau, within this field, the anomalies can be read as widening to north and south (with 6a and 19 seeming to continue 6, while anomalies 7b and 32 (or 30 /28) extend 7. As suggested above (Section 3.5) this hour-glass arrangement may have been for channelling livestock from the higher land of the Top to grazing meadows on the Marshland by the Waithe, and vice-versa. The case for these ditches post-dating those of SMP 1 arises from the fact that 1, 2, 3, and 4 seem largely erased between 6 and 7 (see above, SMP 1). Their fills did not provide the stronger signals associated with the Roman era linear feature fills, suggesting these were land/stock management features rather than being directly related to settlement. The putative barrow of SMP 1 would presumably be extant during SMP 2 and indeed linear feature 7 looks as though it was placed in respect of that feature, skirting it. Finally, it is worth noting that 6 and 7 seem likely to have been wide substantive features. Other features, including settlement, presumably occurred nearby. There is no indication of the date of the SMP 2 features, however, a broad later prehistoric date can be proposed, perhaps within the first millennium BC.

SMP 3. Features assigned to this period are located in the western half of the field, that is, on the plateau area, particularly across the south-western part of the

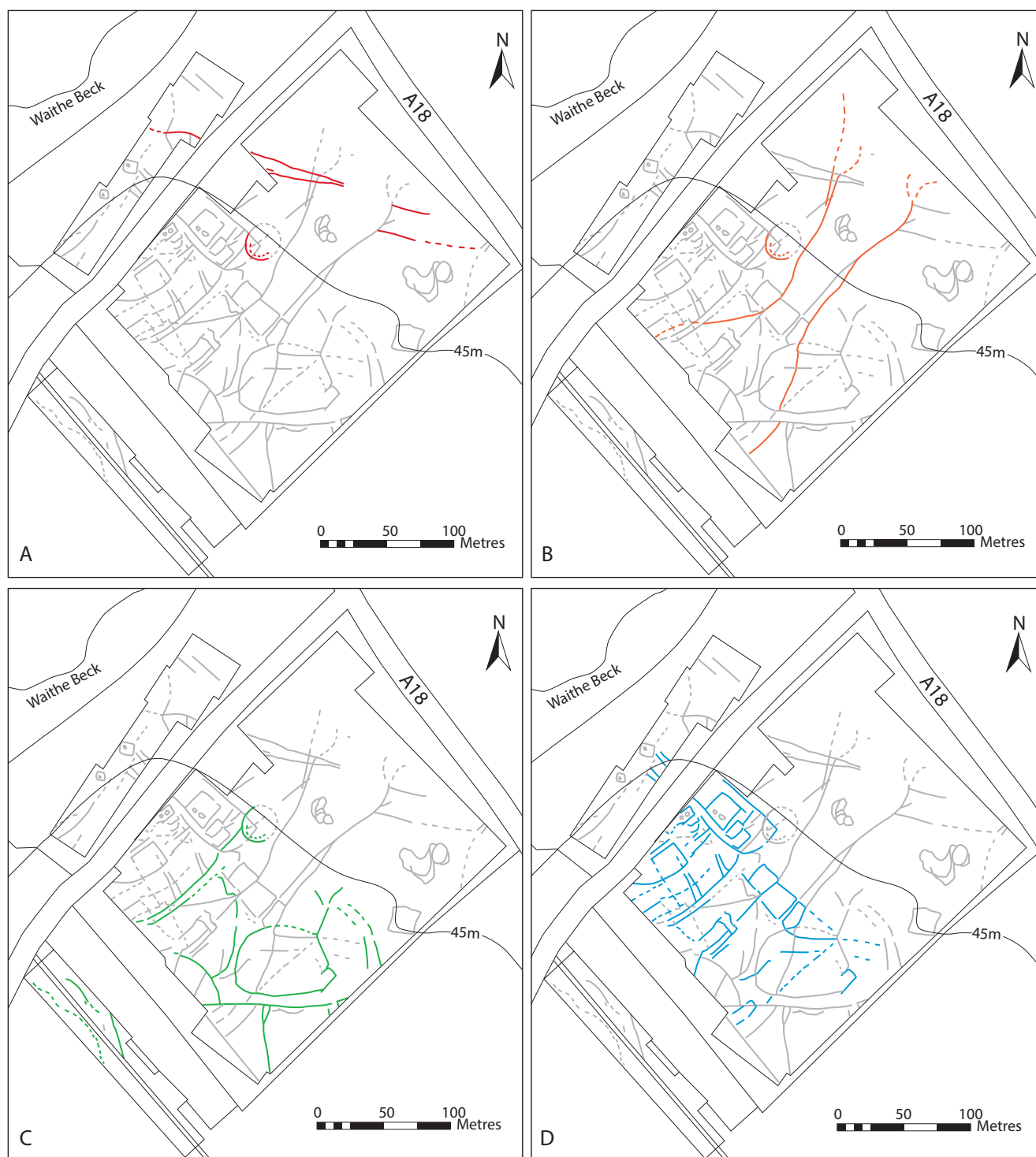


Fig. 11.1 The development of the site at Hatcliffe Top: suggested broad periods based on morphological features.

field (Fig. 11.1C). A major element of this SMP is the large sub-oval enclosure 18, the ditched enclosures (fields?) to its south and apparent trackways flanking these features. The pair of linear anomalies 35/36 define a trackway bisecting the plateau and are aligned to the putative barrow (which in this period may still have been extant); they may have served a similar function to 6/7 in moving to/from the plateau to the

lower part of the field and Marshland; they might be associated with apparent enclosure by their western end. Features allotted to this SMP generally have a curvilinear character that can be suggestive of later prehistoric landscape organization (cf. Edis *et al.* 1989), creating enclosures of a comparatively large scale for this site and trackways of similar width. There is a contrast with the much smaller rectilinear

enclosures of SMP 4 to the north in Corner Field which are contrasting in their uniformity. There is more than a suggestion of overlap of features of SMP 3 and SMP 4 indicating they belong to different organizational ideas. Possibly more features of SMP 3 lie to the north but are masked by SMP 4 features. Given that SMP3 and SMP 4 features are mainly concentrated in different areas of the field the possibility that there is some contemporary aspect needs to be borne in mind for their form and differing spatial incidence may arise instead from contrasting functions. There is similarity in the strength of the anomalies generated from a number of the fills of SMP 3 and SMP 4 that should also be noted.

SMP 4. This period is characterized by an orderly arrangement of sub-rectangular enclosures spanning much of the plateau area of the field (Fig. 11.1D). The enclosures are largely of similar scale, with some suggestion of 'half units' of oblong form. Broadly these enclosures are arranged in two parallel strings. The overall composition is essentially coaxial, laid out in an alignment that takes its cue from the linearity of the Waithe gorge to the immediate north and the fall-off of the Wolds edge to the immediate east. Arrangements of similar kind are a known characteristic of the Roman era in Lincolnshire and the East Midlands (Fig. 11.2). Cases in point have been illustrated from air photographic evidence, as

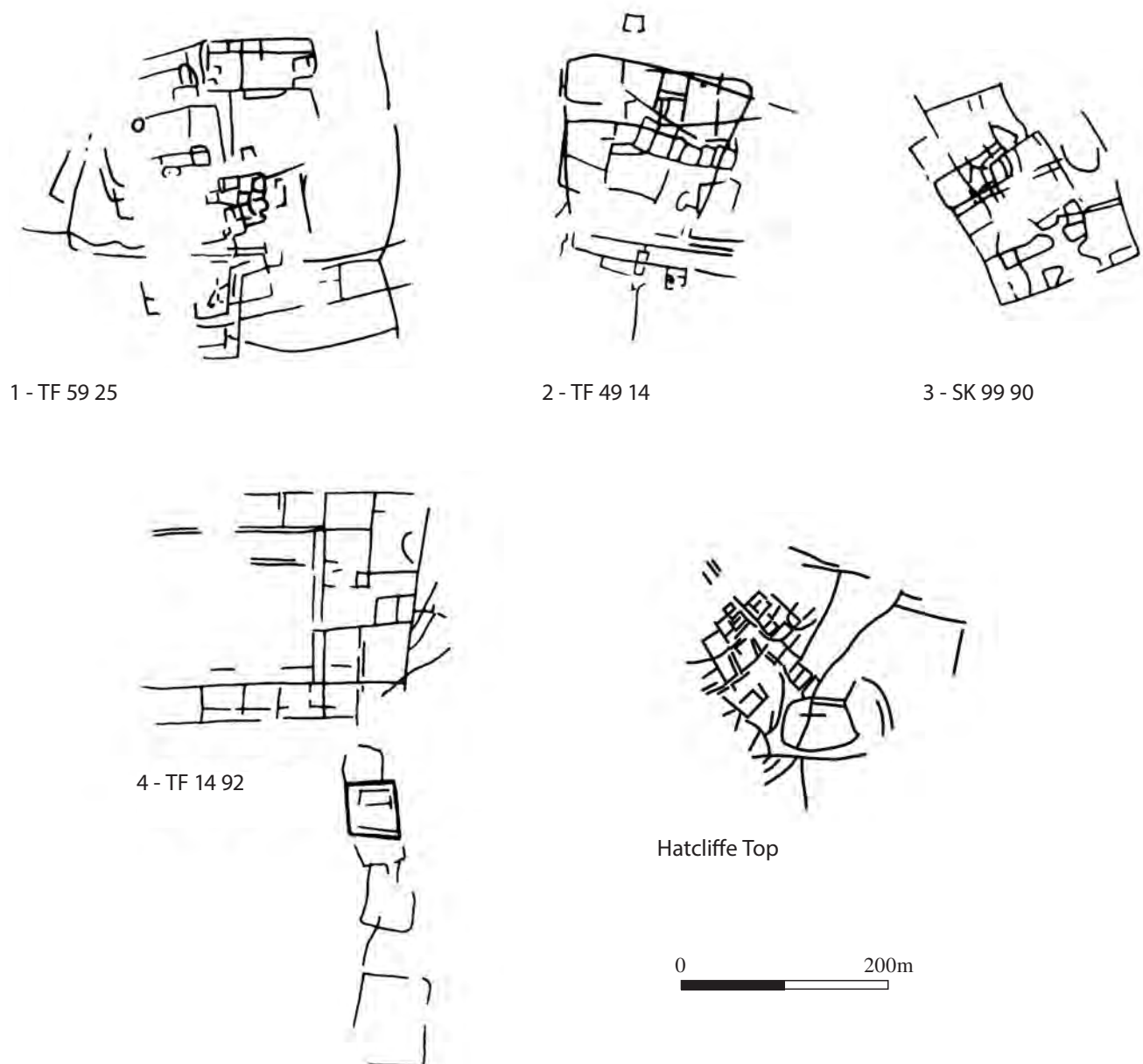


Fig. 11.2 The morphology of some larger Roman era rural sites in Lincolnshire as known from aerial photography (Sites 1-4; see 11.3.2; site 4 here is Walesby Top) compared with the site at Hatcliffe Top based on geophysical survey.

for example in west Lincolnshire (Winton 1998, fig. 4.2), at Glentham Cliff near the A15 and Cross Lane in the Ancholme valley and on the Wolds (Jones 1988, figs 8, 17 and 19; 1998a, figs 4, 6, 8 and 11; Taylor 2007). Similar examples dating to the earlier and later Roman periods have been encountered through survey and trenching in advance of pipe-laying between Covenham and Boston (earlier Roman sites: B4 on the Marsh, H1 on the Wolds edge near Authorpe and Z2 in the Fens; later Roman site: A2 near Covenham on the Marsh (Bush forthcoming)).

At Hatcliffe Top the date and nature of these features was confirmed through the excavated evidence associated with this SMP at Trenches A-E. Sites of this type of arrangement, as revealed via cropmarks, occur in and around the Waithe valley, and must represent a class of rural farm complexes perhaps the focus for one or more extended families given their scale (cf. Jones 1998a). In some cases these sites can be highly uniform, and in others more of an apparent incremental nature as here and, for instance, at Walesby Top (Fig. 11.2). Within Corner Field the fills of these enclosures generated strong readings in response to geophysical survey while the great majority of the Roman coins and other metal finds, together with the bulk of the surface collected pottery (Fig. 3.4) came from the area of the SMP 4 enclosures. Several points might be mentioned. Firstly, excavation confirmed these anomalies to be archaeological features in a comparatively good state of preservation. Secondly, upon excavation, the area of these enclosures proved to have many more features, especially of a linear nature (ditches, gullies and related recuts) demonstrating that the imprint of activity and site development for this SMP at least, is far more complex than this geophysical data can suggest. Ditch re-cutting was observed at all trenches where features of this period were encountered (i.e. A-E). What is recorded from the excavations especially for this SMP are elements attending to enclosure, movement and access, that is the definition and control of movement and space (at least that is the emphasis of the remains as they have come down to us). The sequence of five superimposed cuts of this date at the eastern end of Trench A is particularly striking. Overall the evidence shows a range of instances of the assiduous maintenance of site organization. The morphology of this SMP is broadly maintained through time from its first impression, as Trenches A-E show early and subsequent use through this period, rather than there being expansion or contraction within this Late Roman episode. That said there was reorganization and a sequence of changing uses at the western end of Trench C and at

Trench D albeit nonetheless adhering to the overall co-axial 'grammar' established in earlier phases. Further, an aspect of this complexity is the re-use of ditches for the placement of corn dryers and ovens together with the high quantities of burnt remains their firing will have generated and which became spread around the site: several point concentrations in the geophysical readings probably relate to this widespread activity of the SMP. Finally, cropmark sites of similar date and form often lack a visible wider arrangement of field ditching extending from the core of enclosures as seems the case here; possibly that was because boundaries were defined not be ditches but hedges, fences and (close-by the activity area) hurdling. Molluscan evidence from the ditch at Trench E indicated that this was likely to be a boundary feature with grassland (for grazing) to one side; this is consistent with the geophysical and excavated evidence indicating that this ditch indeed formed a boundary to the Late Roman site. Judging from the finds this Late Roman complex was current for 150 years if not a little longer. There is no discernible imprint of an early Medieval morphology: features of that era were elusive (cf. Chapter 4).

In sum, Corner Field contains a palimpsest of the morphologies of several activity periods inscribed on this land, representing sustained use of the area through later prehistory, the Roman era and into the Medieval period. The amount of archaeology revealed in Corner Field is clearly very large and one suspects that geophysical survey in adjacent land will reveal a widespread pattern of past human activity unknown to date.

11.4 The Distribution of Finds Types

The spatial location of individual finds was logged during the excavations and associated metal detecting surveys. This information has been used to generate the distribution plots Figures 11.3 to 11.12. The category order approximately follows that of Chapter 7, with the bracelets plotted with the hair pins on the basis that these two categories may more likely relate to use by women; brooches and rings are then plotted. The great majority of logged find locations from across Corner Field relate to discoveries during the systematic metal detecting which was undertaken across all areas of the field to ensure representativeness. Various non-metal finds noticed on the field surface were also spatially logged where noteworthy, such as sherds from mortaria, samian, cheese-presses and hones. These items are not plotted for this report as there are too few to be meaningful and given their ploughsoil context.

Figure 11.3 shows the locations of the four recovered metal hair pins. All were recovered from the ploughsoil via detecting. None of the types is chronologically specific as in all four cases they are either Roman or Anglo-Saxon (cf. Section 7.1.1). Given this aspect and their small absolute number little can be said regarding the recorded distribution, though unlike some other finds categories not all examples came from the plateau area of the western half of the field. Figure 11.3 also shows the incidence

of the metal bracelets. There are five known from Corner Field. All five bracelets are from Late Roman types. One (Item 2 RF 2110) was recovered by Mr Stephenson and so its precise location is not known, only that it came from the general area south-west of the quarry. The four other bracelets were all recovered by metal detecting the ploughsoil. The four examples all came from the plateau area on the western side of the field, in this case southwest of Trench A.

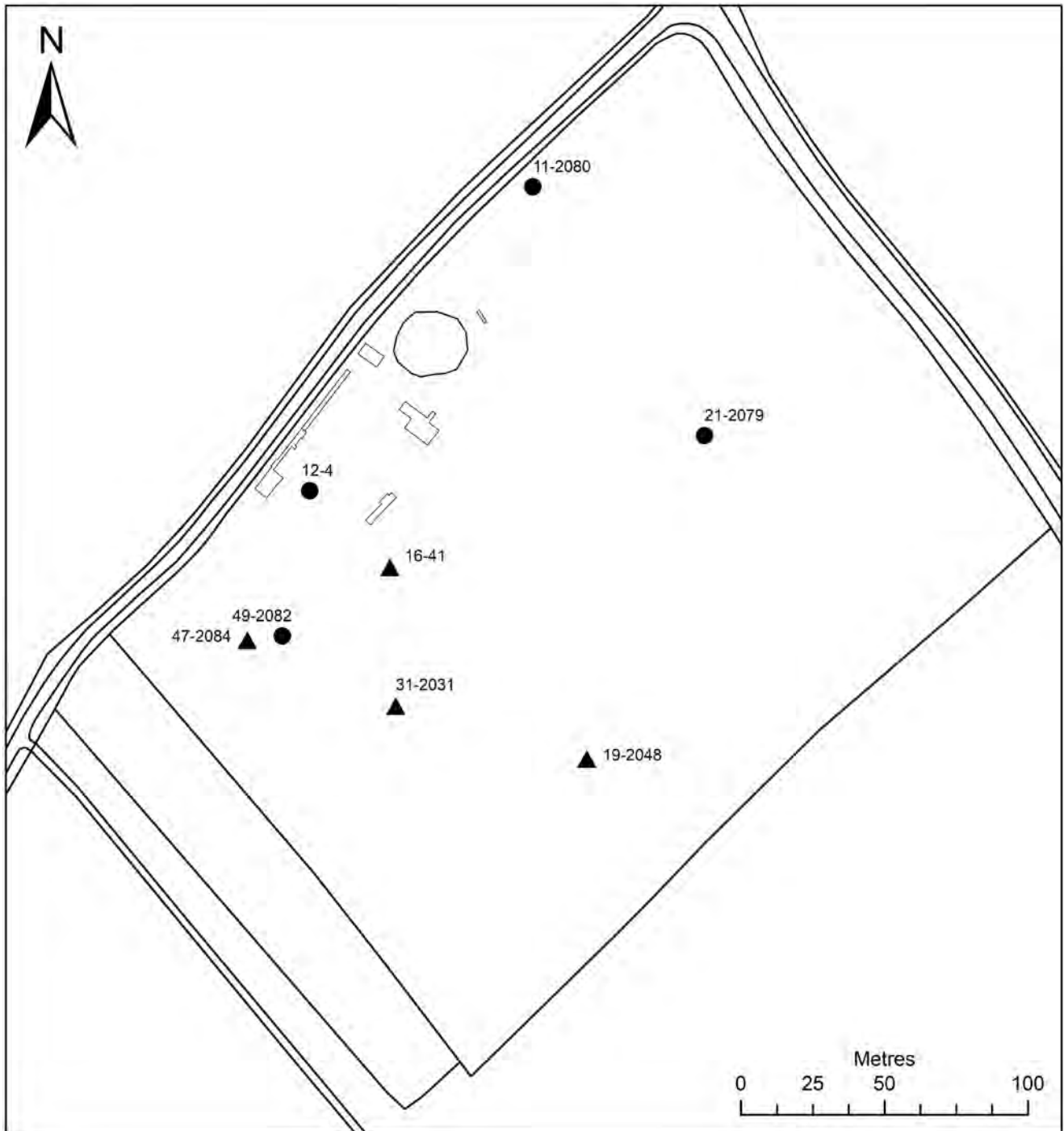


Fig. 11.3 The spatial incidence of hair pins (circle symbols) and Roman bracelets (triangles) from Corner Field, with identifying RF numbers.

Turning to the brooches there are five brooches represented amongst the finds recorded from Corner Field (Fig. 11.4). One is from the Stephenson Collection (Item 9 RF 2109) and its location is approximately recorded on the basis of information from Mr Stephenson. The other four examples were recovered by metal detecting in three instances, whilst the remaining brooch (Item 23 RF 3504) came from the base of the ploughsoil at the western end of Trench C. The distribution plotted in Figure

11.4 shows four of these brooches lying south-west of Trench A. The types themselves and their dates are varied. The example of Fowler's Type 4A (Item 23) is not well-dated (cf. 7.1.2). The two Trumpet type brooches (Item 20 RF 2071 and Item 9 RF 2109) would normally be associated with late first to second century AD contexts. The bead apparently from a Crossbow brooch and the penannular snake brooch should be fourth century. This diversity suggests differing histories and associations for these items, and

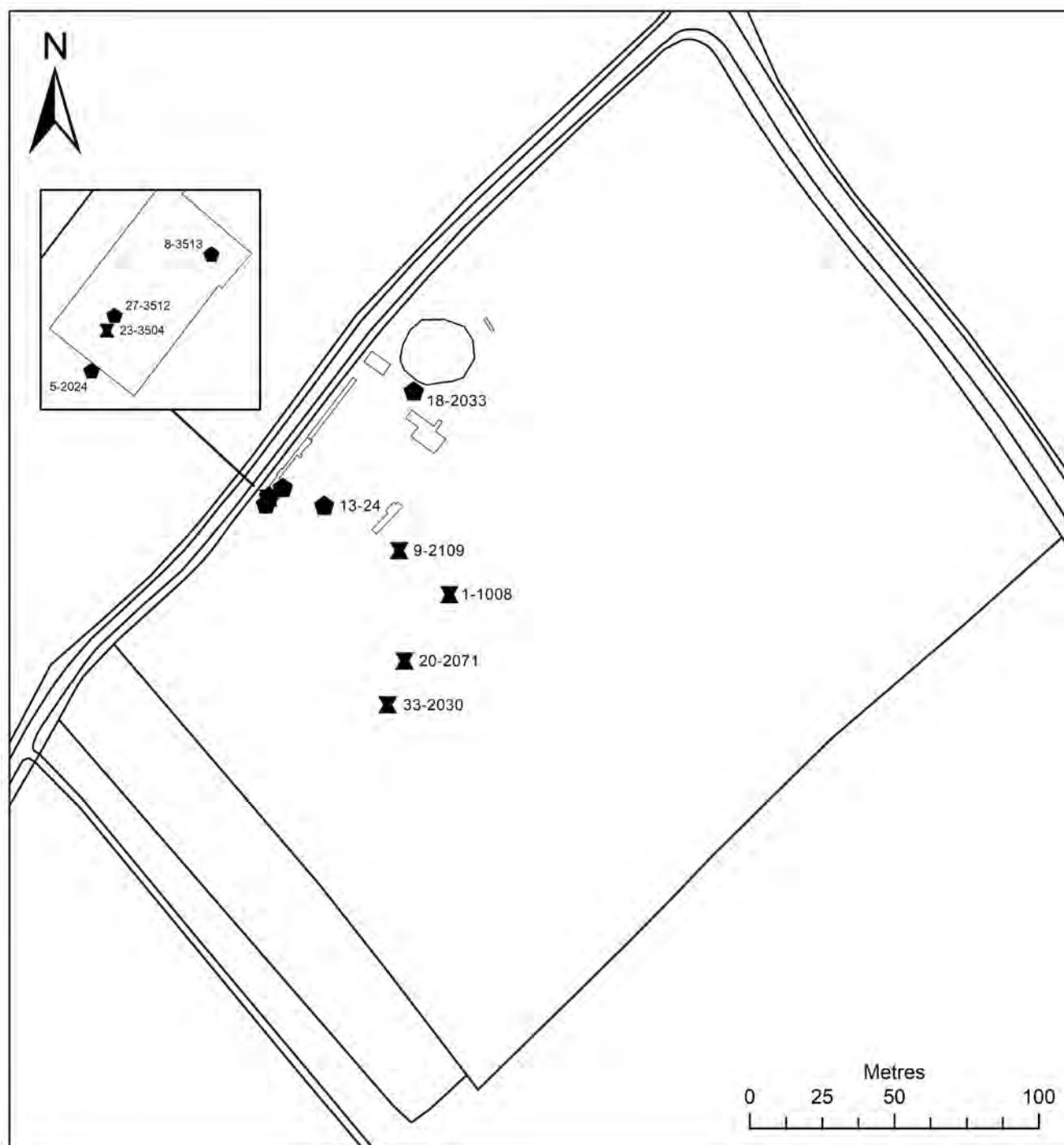


Fig. 11.4 The spatial incidence of Roman brooches (hour-glass symbols) and finger rings (pentagon symbols) from Corner Field, with identifying RF numbers.

given such a small number of cases little comment can be made on their spatial occurrence other than to note that as a group they all come from the north-western quadrant of the field.

As regards finger rings, their distribution is also shown in Figure 11.4. There are five examples, all from ploughsoil and all likely or certainly Roman. The fragment from the Late Roman gold ring (Item 18 RF 2033) came from the ploughsoil between Trenches D and E near to the modern quarry hole. Two others

came from excavated ploughsoil at Trench C (Item 27 RF 3512 from the western end of the trench and Item 8 RF 3513 likewise from the western end). Item 5 RF 2024 came from ploughsoil in 2009 to the west of Trench C and Item 13 RF 24 also came from ploughsoil but from just south of Trench C in 2015. The identification of Items 5, 8 and 13 as finger rings perhaps needs some comment given they are fragmentary. There might be some chance they are from bracelets but this seems less likely when one

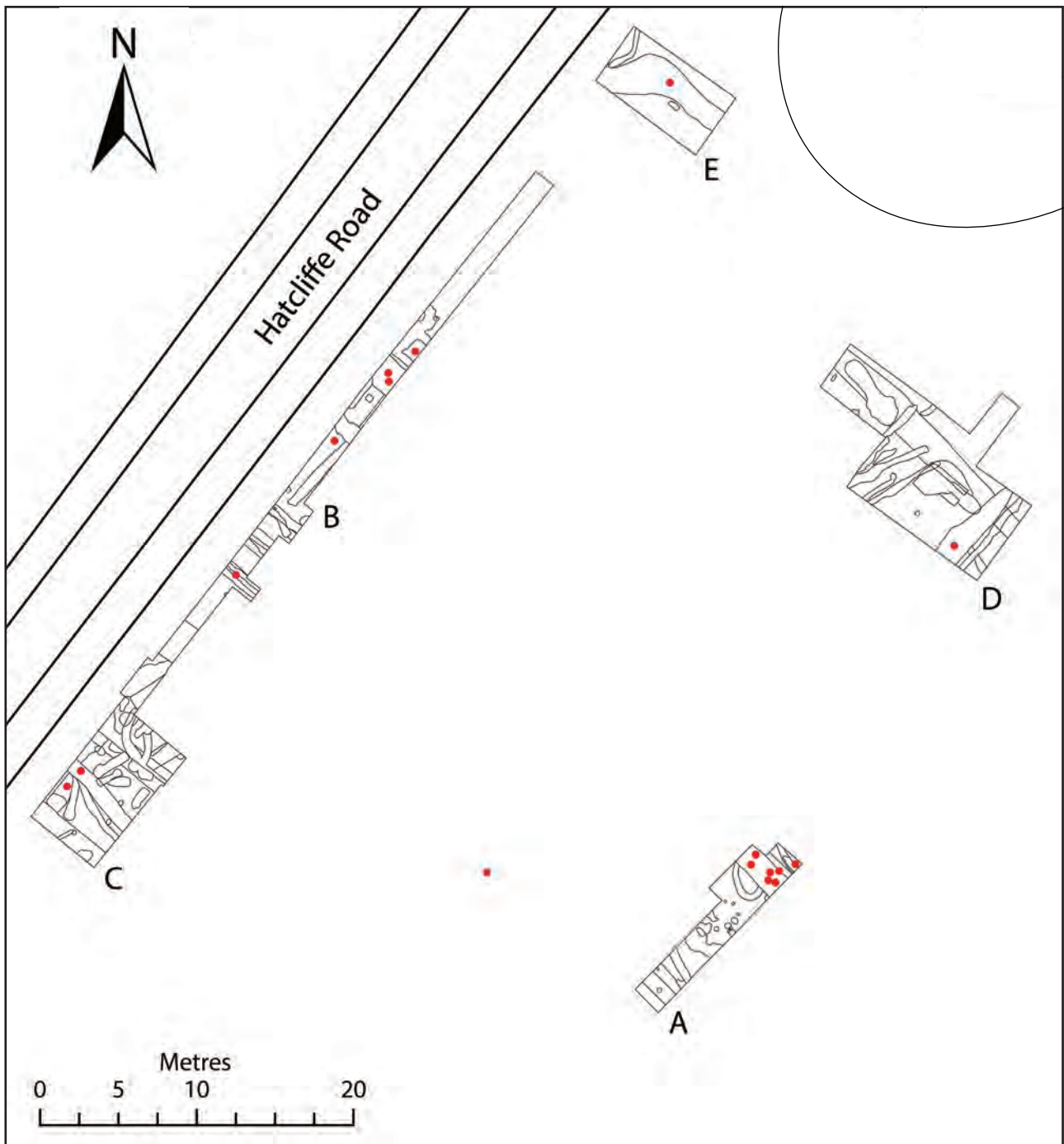


Fig. 11.5 The spatial incidence of hobnails from the trenches and the ploughsoil in the area of the trenches.

considers how thin and light they are which would make them vulnerable to snapping. Items 8 and 13 are of similar design but differing widths so certainly different items. They are flat thin bands of a type that implies a finger ring. Items 5, 8 and 13 have features suggesting symbolism of the snake (Section 7.1.4 and 11.7.2). There is a chance Item 5 is a finger ring made from a bracelet fragment.

The incidence of hobnails is shown in Figure 11.5. As highlighted in the discussion of these finds the

occurrence is widespread with examples coming from all five of the main trenches, the majority being stratified finds. There is a clear association with ditches which probably reflects the fact that these features lay besides or near to paces of human movement around the site and the fact that these features contained the greater volume of the excavated archaeological layers. Sixteen of the nineteen examples came from within the excavated trenches, and only three from the metal-detecting of the field, hence Figure 11.5 shows

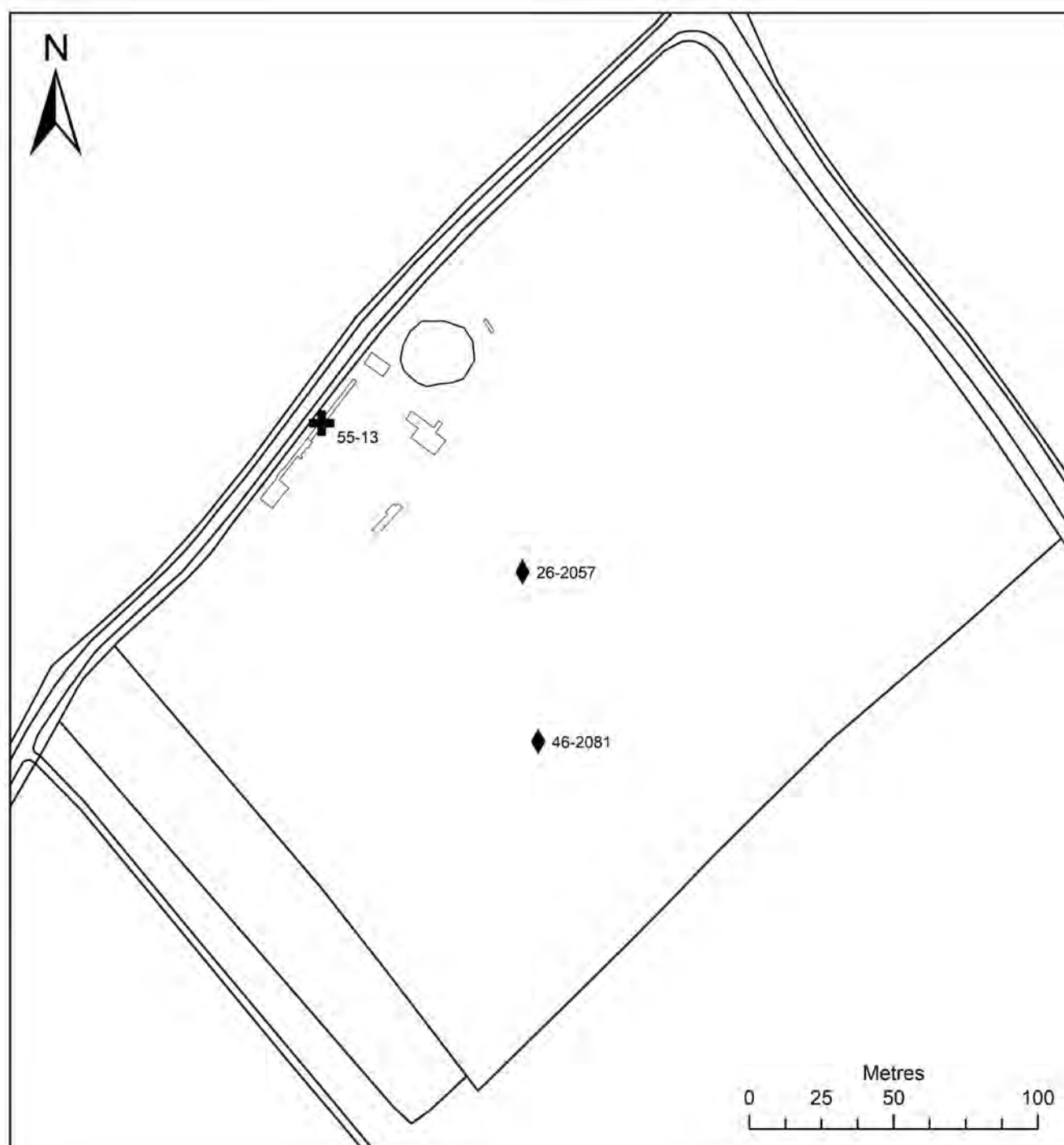


Fig. 11.6 The spatial incidence of the two seal box fragments (diamond symbols) and a possible iron stylus (cross symbol) from Corner Field, with identifying RF numbers.

the location of the 16 from the trenches plus one from the field, within the area of the figure. Small ferrous readings were not normally targeted by the Project detectorists as such readings proliferate in the field, hence the few recovered from Corner Field ploughsoil are very unlikely to be representative of the numbers in the ploughsoil (where they will be especially prone to disintegration).

The locations of the two seal box fragments, being two halves of the same seal box, are shown in Figure 11.6; the break is an old one (Item 26 RF 2057 and

Item 46 RF 2081). As noted above (Section 7.5) they were recovered by metal detecting seven years apart. Figure 11.6 demonstrates the find-spots are separated by a distance of some 60 metres. This reminds us that 'reading' distribution plots is not straight forward. A range of factors individually or in combination might explain this separation. The find location of the possible iron stylus (Item 55 RF 13) is also shown on this plot.

Figure 11.7 shows the find-locations of knives, the chisel and the two buckles, all being from the

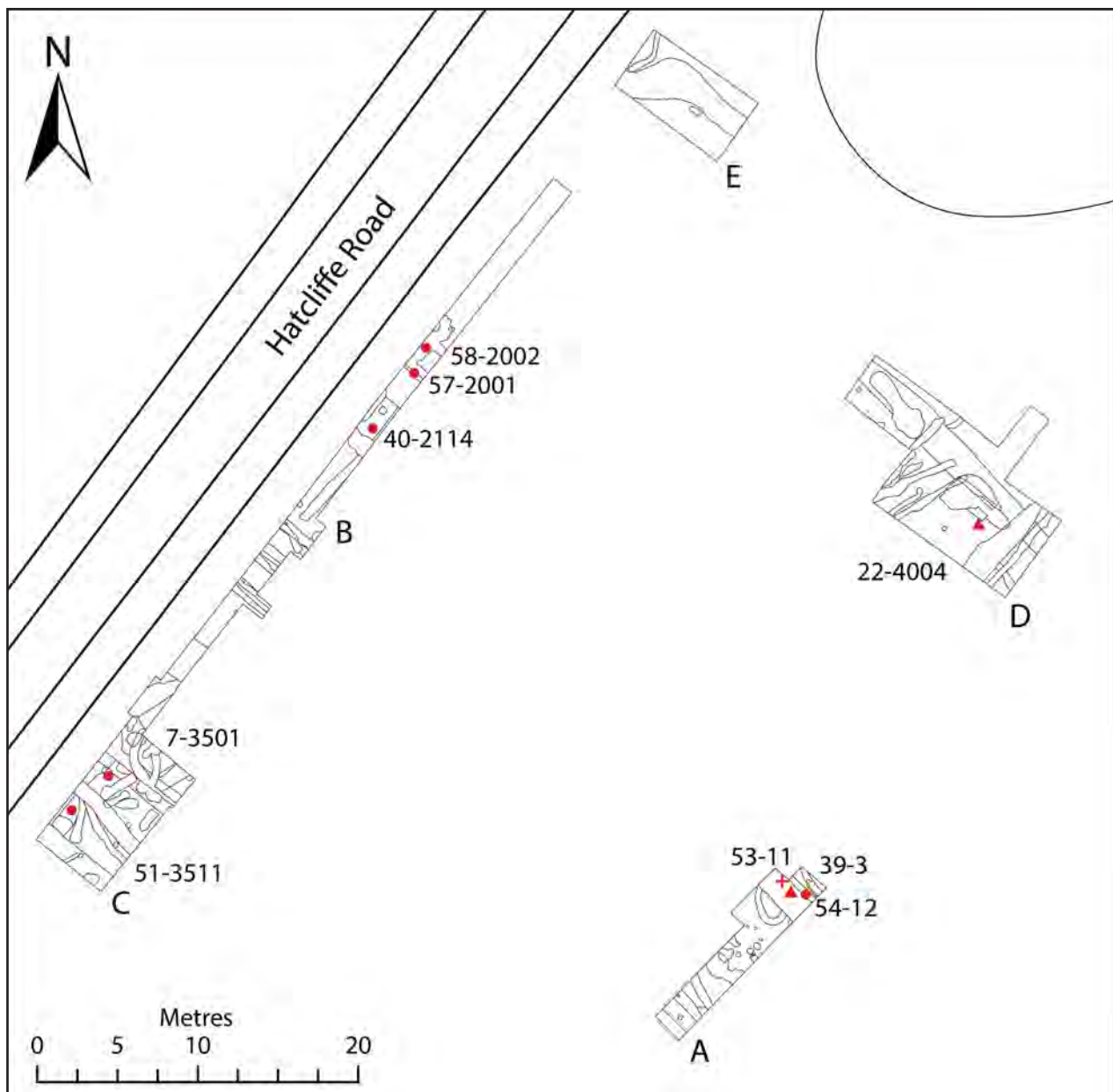


Fig. 11.7 The spatial incidence of knives, a chisel blade and two buckles, all from the excavated trenches. The find identifiers are as follows: 7-3501, 40-2114, 51-3511, 54-12, 57-2001, 58-2002 (circle symbol) are knives being, Item 7 RF 3501, Item 40 RF 2114, etc.; 53-11 (cross symbol) is the chisel blade Item 53 RF 11; 22-4004 and 39-3 (triangles) are buckles, Item 22 RF 4004 and Item 39 RF 3. See Chapter 7 for contextual and other details.

excavated trenches. Both buckles and the chisel were stratified (cf. Chapter 7) as was the knife from Trench A, one of the knives from Trench B (Item 40 from Context 2038) and the knife from Trench C (Item 7 Context 3502). The other knives were from ploughsoil/topsoil at B and C, (Items 51, 57 and 58).

The incidence of nails is shown in Figure 11.8. Nails occur widely across the site with examples present in all five of the main excavation trenches. Whilst there is a certain amount of spatial clustering this seems largely a function of the areas with larger volumes of archaeological deposits and where

finds of other types tend to likewise cluster rather than necessarily be indicative of the proximity of buildings or other structures (cf. Section 7.8.2).

There was only one example from Trench E, but this trench produced less finds proportionally than other trenches (cf. Section 11.5) while at Trench D they also seem comparatively underrepresented by volume excavated, probably explained by the functional use of this area in its later stages for crop processing.

The spatial incidence of the quernstone fragments and the stone bowl (mortar) are displayed in Figure 11.9. The items are all likely to be in secondary

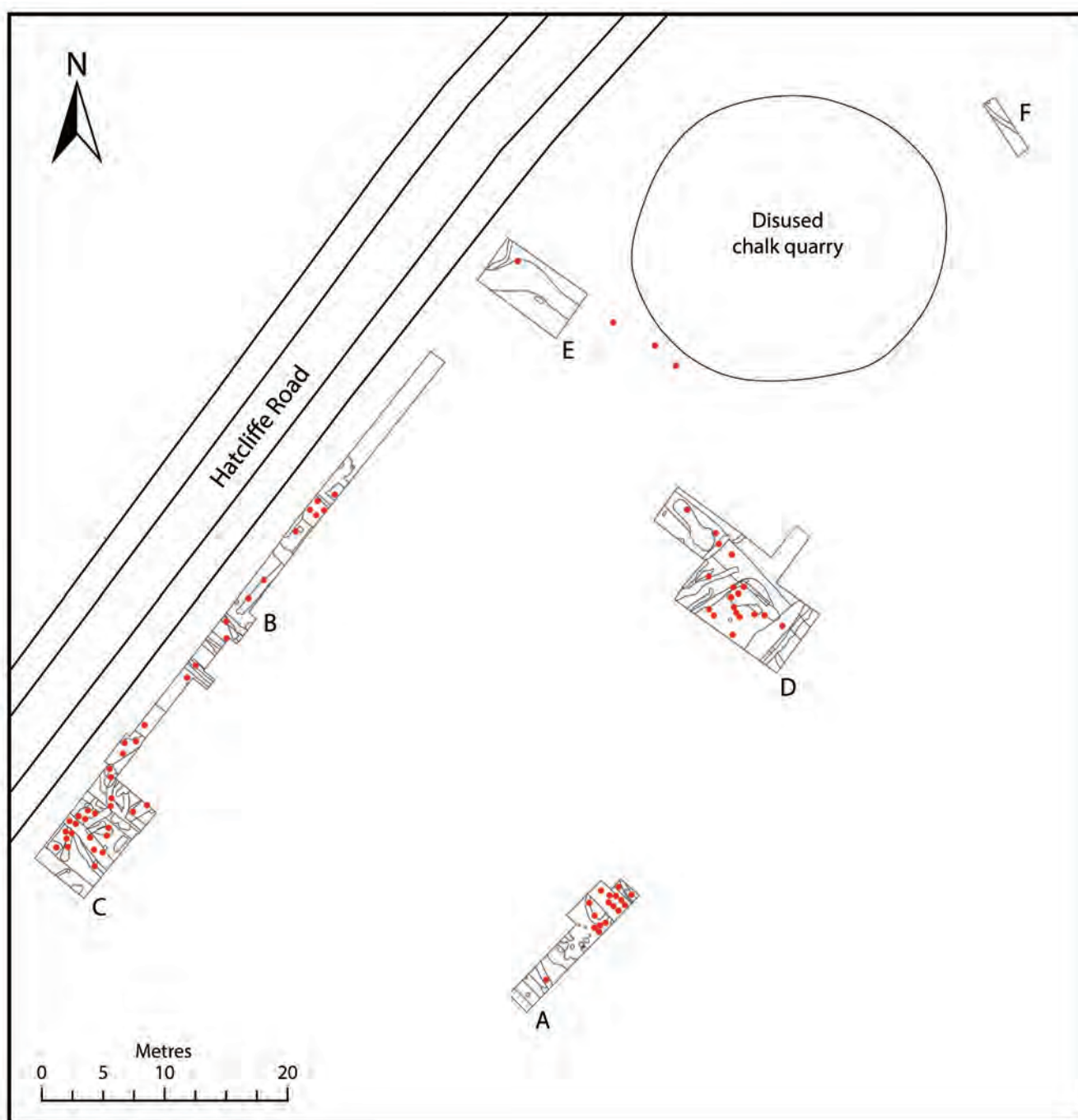


Fig. 11.8 The spatial incidence of Roman nails from the excavated trenches (plus three from beside the modern quarry).

locations rather than this distribution showing an association with the locations of use during their active milling-lives (cf. Section 7.10.3). The quern fragments from the threshold of the corn dryer in Trench D had been intentionally placed there, the broken half of the stone bowl at A formed part of a surfacing layer as did one or perhaps two quern fragments from C, where another two were reused in oven structures.

Figure 11.10 maps the distribution of the coins up to AD 348. One coin is Iron Age (RF 2022) the only Iron Age coin known from the site. This came from near to Trench E. There are no other Iron Age items

from the site but since it is silver it may have been in circulation or use with some value in the Roman era. There are just 17 Roman coins known from the field dating to before AD 300 (Table 7.7) and these are separately distinguished in the plot. Four of these are from the Stephenson Collection and their exact find-spots not known. The remaining 13 are plotted; of these, five are from excavation trenches and eight from detecting across the field. Of the coins from the excavations the two from Trench C (RF 3517 and 3518) are both residual items in the fill of the Ditch [3718] which is late in the sequence. The other three coins predating AD 300 from the trenches came from

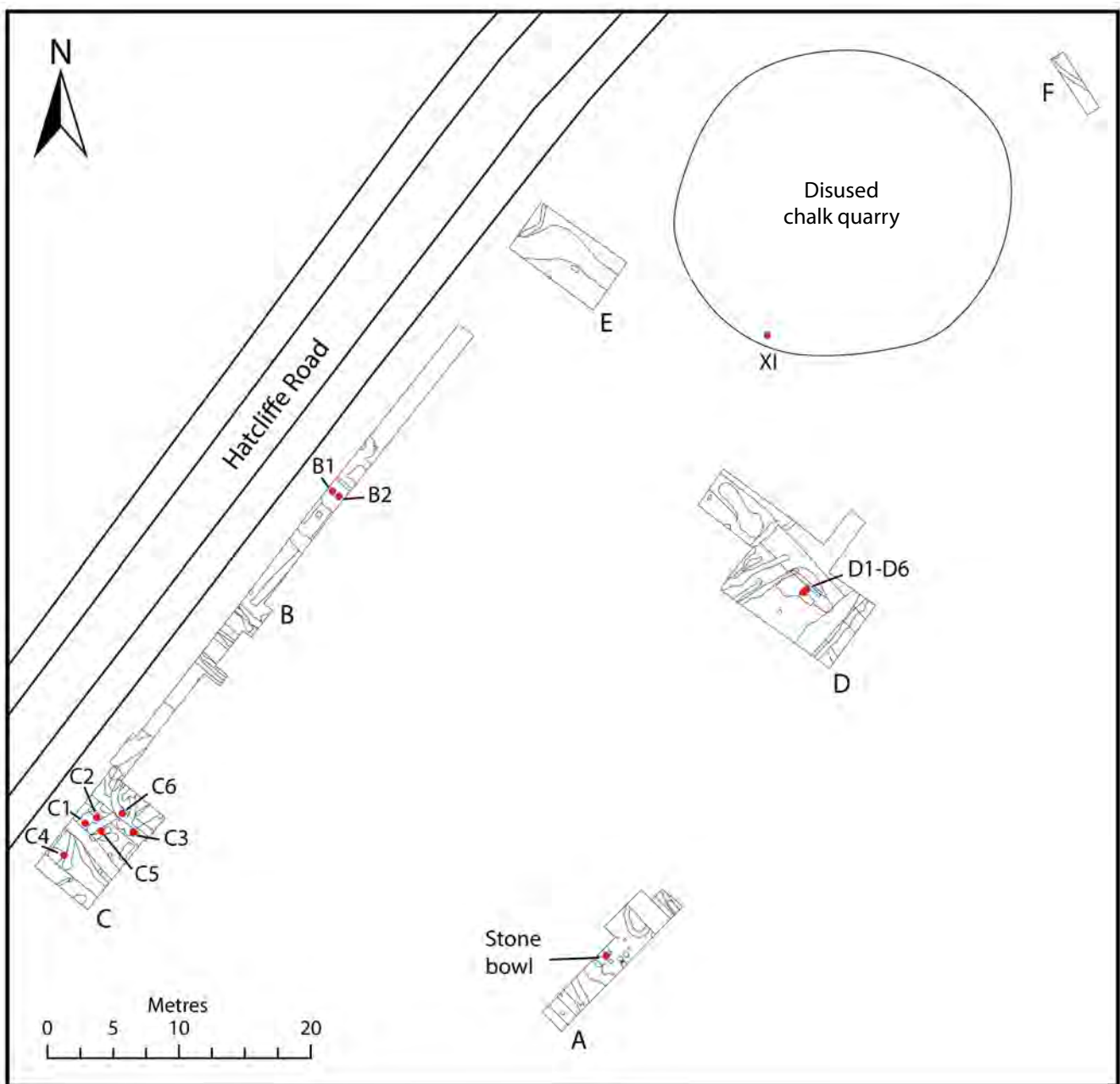


Fig. 11.9 The spatial incidence of the quern stones and stone mixing bowl from Corner Field with identifying codes.

D where again they are evidently residual in deposits later in the sequence. It is likely these coins, being of later third century date, were in use during the earlier phases at these trenches. Discounting the Iron Age issue, the eight remaining coins of this date bracket, recovered through detecting are quite dispersed. It may be significant that only two of the plotted coins dating before AD 300 come from the south-west quadrant. That said, taking only the coins recovered

via detecting the distribution does not appear uneven.

Discounting the coins from the excavated trenches, collectively Figures 11.10 and 11.11 show Roman coins to be relatively frequent from the south-west quadrant of Corner Field. This pattern is at some variance with the incidence of surface Roman pottery collected by the Society during systemic fieldwalking (Fig. 3.4) which shows a much stronger distribution

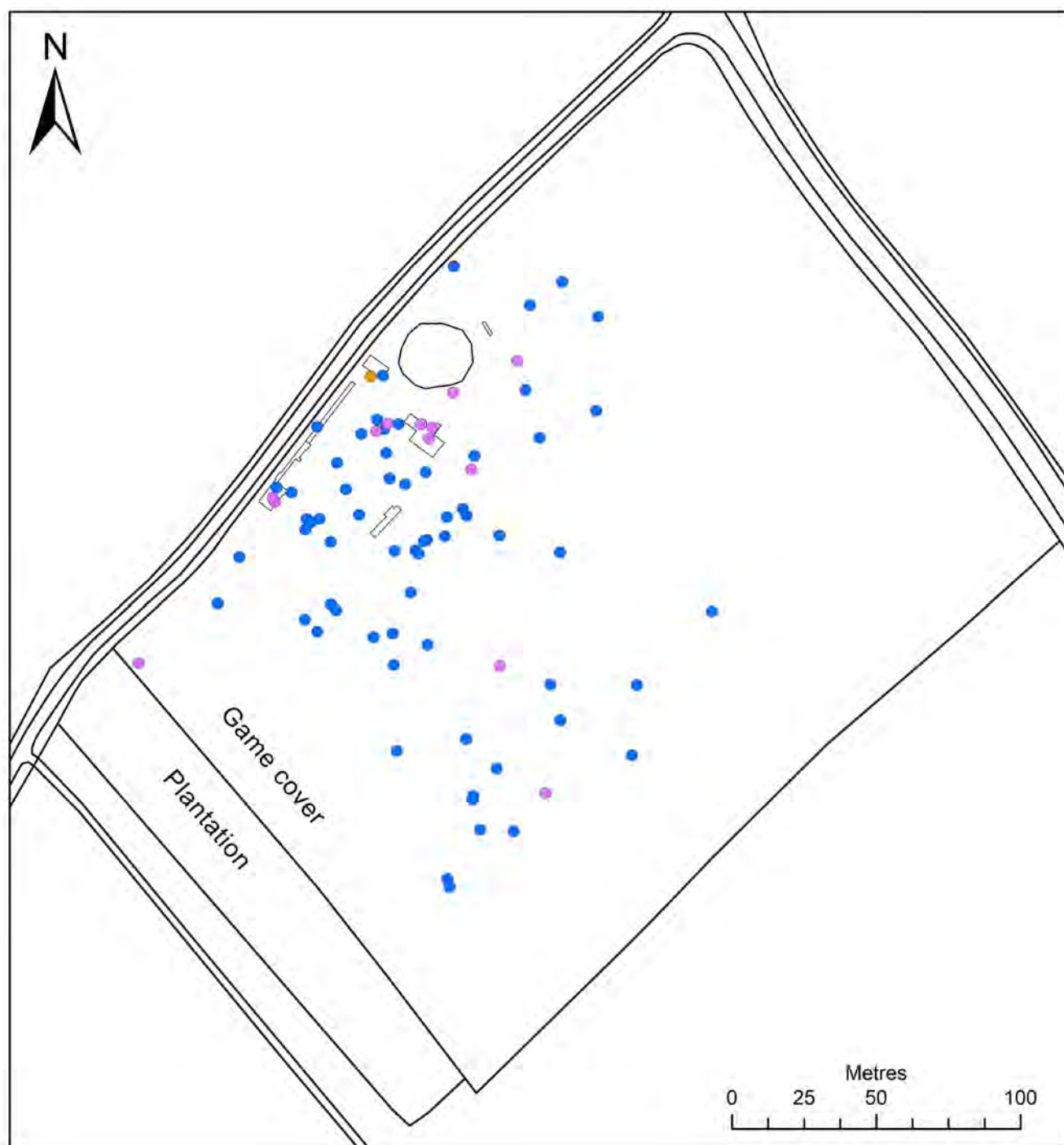


Fig. 11.10 The spatial incidence of coins from Corner Field up till AD 348. Key: Orange circle: the Iron Age coin; Dark pink circles: Roman coins to the end of the third century (Reece periods to period 14); Blue circles: Roman coins AD 296-348 (Reece periods 15-17). (Excluding coins of the Stephenson Collection, and coins of uncertain or illegible attribution).

of sherds in the north-west quadrant, particularly towards the northern edge of the field. This may arise from differing uses of these areas through the later Roman era; that possibility, however, can only be verified by excavation.

The find locations of items of certain Anglo-Saxon date are shown in Figure 11.12. The cruciform brooch (Item 64 RF 2072) was found in the ploughsoil near the north-east corner of the field. It is an outlier

both spatially and chronologically, dating to c. AD 475–550. There is nothing certainly of similar date to associate this find with in terms of metalwork from the site. The pyramid mount (Item 42 RF 30) was recovered in the north-west quadrant of Corner Field; such items normally date to the later 6th century so this item would be subsequent to the brooch. Brooches and pyramid mounts are often associated with graves of the early Medieval era. Although there

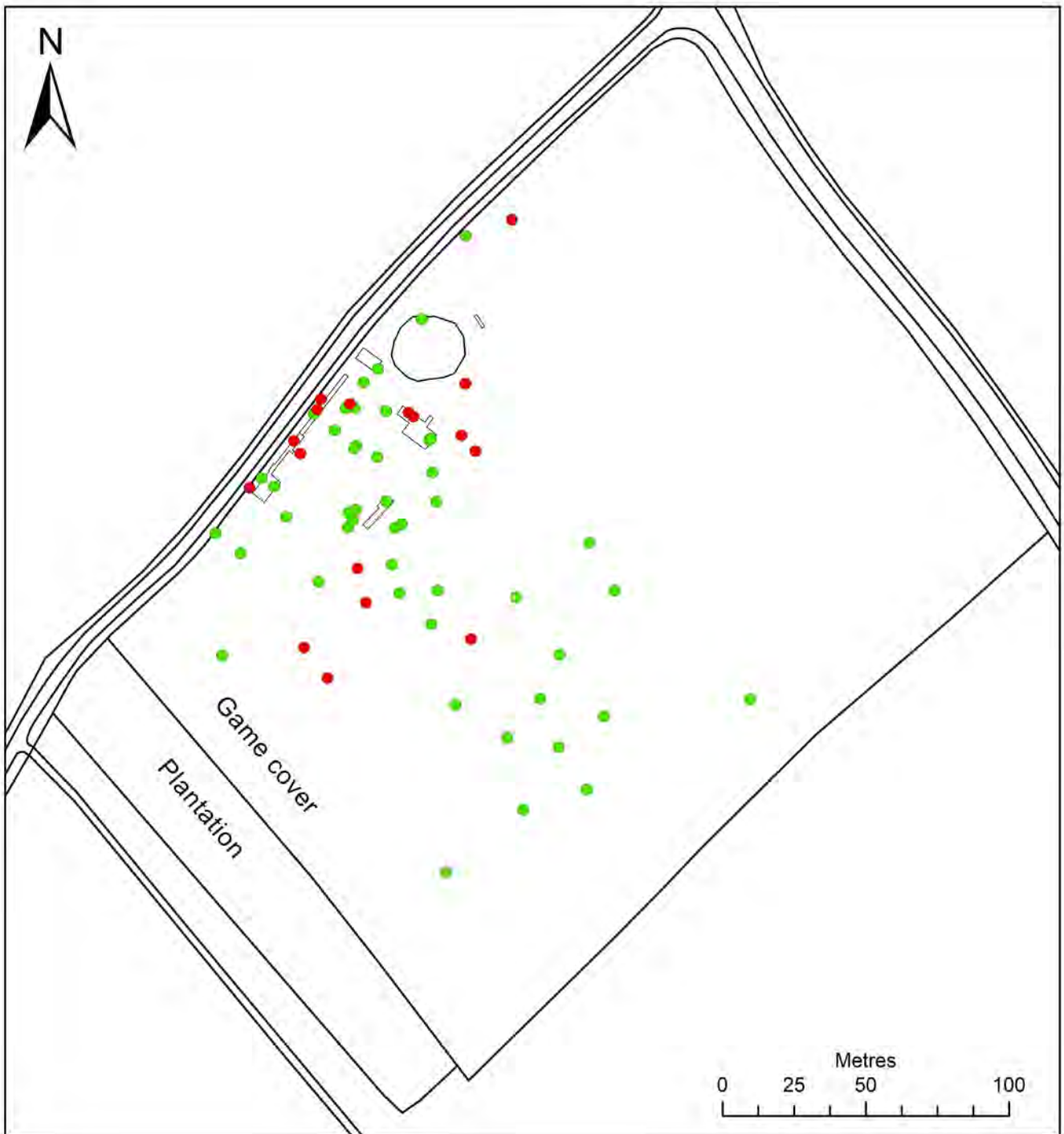


Fig. 11.11 The spatial incidence of coins from Corner Field from AD 348 till the end of the Roman era. Key: Green circles: Roman coins AD 348–388 (Reece periods 18–20); Red circles: Roman coins AD 388–402 (Reece period 21). (Excluding coins of the Stephenson Collection, and coins of uncertain or illegible attribution).

is no indication that there are graves in the area of Corner Field it is possible that such exist hereabouts. The five Anglo-Saxon sceattas from the field (Table 7.7) are fairly widely distributed (Fig. 11.12). They belong to the early 8th century and so are later still than the mount and brooch. Two of these coins were recovered near to Trench A where indeed the systematic fieldwalking by the Society had previously

produced two Anglo-Saxon pottery sherds (Fig. 3.5) with the excavations at A recovering a small contemporary assemblage (Section 6.2.9). Regarding these finds, the presence of the metal hair pins (Fig. 11.3) might be taken into account as they could belong to this era (cf. above). Taking a wider view, a number of Anglo-Saxon foci and finds are known along this eastern edge of the Wolds (Section 2.2.3).

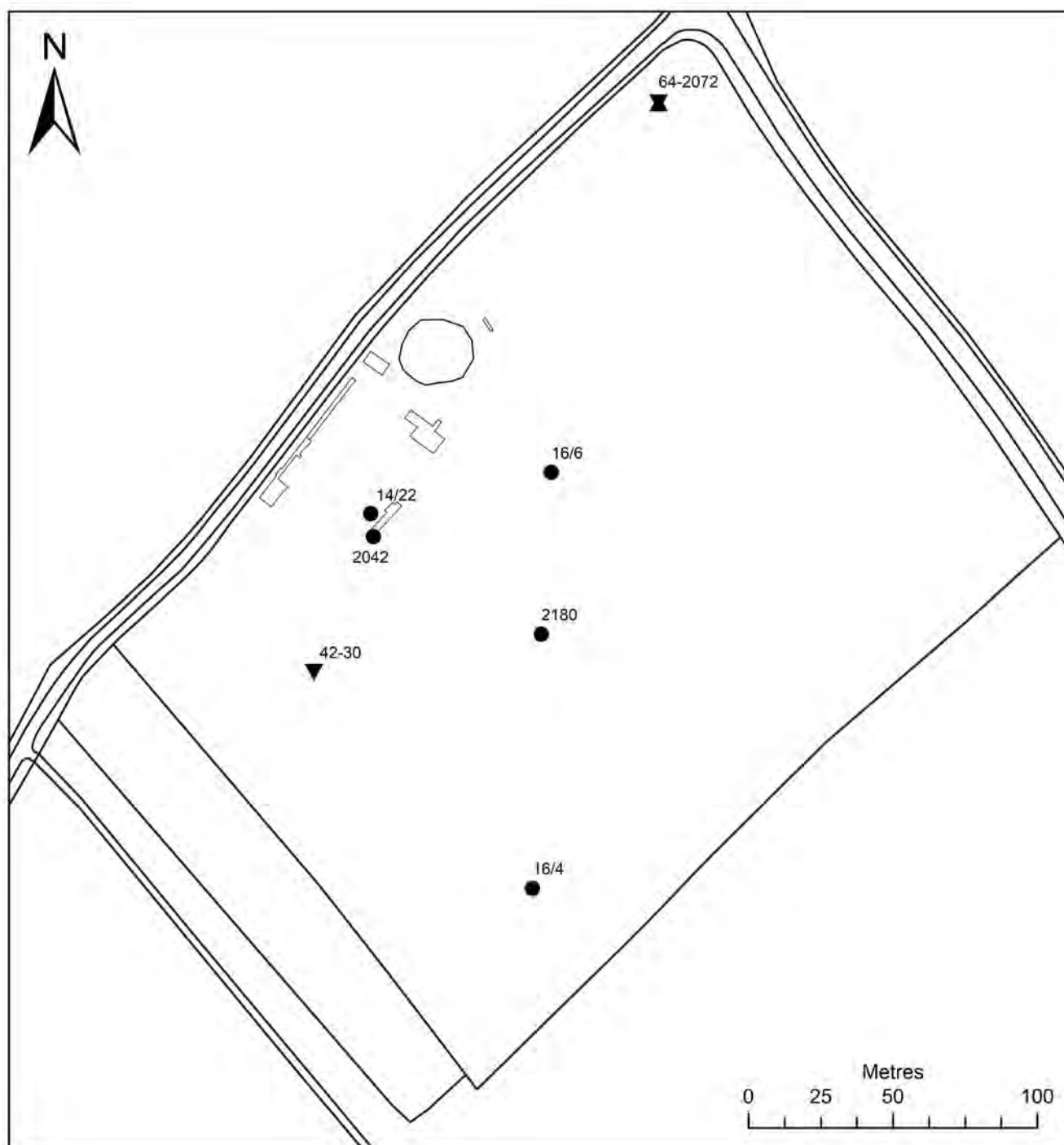


Fig. 11.12 The spatial incidence of Anglo-Saxon coins and metal finds from Corner Field. The find identifiers are as follows: 64-2072 (hour-glass symbol) is the cruciform brooch Item 64 RF 2072; 42-30 (inverted triangle) is the mount Item 42 RF 30; 14/22, 16/4, 16/6, 2042 and 2180 (circles) are Anglo-Saxon coins (see Table 7.7). All were recovered from the ploughsoil.

11.5 Taphonomic and Volumetric Study

This section examines aspects of deposition and site formation, looking at the general distribution of the ceramic finds, the condition of the pottery finds and the frequency of pottery and bone finds via volumetric study.

One of the observed characteristics of the excavated pottery from Hatcliffe Top was generally how comparatively small the sherds appear. This can be demonstrated through a comparison of the sherds from the re-cut ditch sequence at the eastern end of Trench A and the pottery from Ditch [3718] at Trench C with the contemporary pottery from the site at Brookenby further up the valley. The latter sample comes from a Late Roman layer of fourth century date at Trench C, overlying the dismantled aisled building (featured in Fig. 2.3) and representing subsequent occupation and processing activity manifest in a series of adjacent ovens and dryers (Willis forthcoming b). Both sites were excavated as elements of the wider Central Lincolnshire Wolds Project using the same methods employed by similar teams. The data are presented in Tables 11.1 to 11.4; the sample from Trench A at Hatcliffe Top amounts to 147 sherds, that from Ditch [3718] 160 sherds, and that from Brookenby 306 sherds. As Table 11.4 shows the proportions per sherd type are closely similar. This is likely to be a function of closely similar functional composition (that is to say the groups are formed of pots of similar forms from similar sources) and may be taken to indicate they have broken in a similar manner. Since both the sites at Hatcliffe Top and Brookenby show occupation over several generations levels of residuality (that is sherds likely to be older and more subject to attrition) are likely to be comparable. That said, little amongst the samples appears much abraded or residual. Tables 11.1-11.3 provide information on quantities from which average sherds weights can be calculated. Despite residing in the ostensibly protected environment of the ditches the Hatcliffe samples show low to very low weight figures; the overall average sherd weights being just 10.0g and 11.7g. In the case of the Trench A ditch group sample the figures per sherd type are almost half that of the sample from Brookenby (despite the latter deriving from a layer context where sherds will have been more vulnerable to breakage through trampling etc.). It is likely that the sherds from the ditches at Trenches A and C at Hatcliffe were already at an advanced stage of breakage when they entered the ditches. The assemblage overall from the excavations at Hatcliffe Top, excluding the post-Roman material, amounted to 2922 sherds with an average weight of

10.8grams (Chapter 4). Available quantitative data from regional sites is limited but further comparison can be made with some available figures. The late third and fourth century phases at the Roman rural complex at Burringham Road, Scunthorpe, produced 1444 sherds of Roman pottery with an average weight of 14.6g (Phases 9-11, data from Darling 2009, table 1), in other words the sherds from this site were almost 50% greater in weight (and doubtless larger sherds) than at Hatcliffe Top on the basis of this comparison. A corresponding pattern is suggested by the figures relating to the excavations at the Roman rural site at Burnby Lane, East Yorkshire, where the average sherd weight for the third and fourth century phases is 16.3g (Periods 3.2 and 4, data from Mills 2015, table 9.1). Rowlandson reported an average sherd weight for the Roman Roadside Settlement at Navenby of 11.8g (7316 sherds) but observed that a norm for similar sites would be nearer 20g (Rowlandson 2011, 77).

Returning to the Trench A ditch group pottery and its comparison with the contemporary group from Brookenby layers (3135)/(3136), Figure 11.13 plots the frequency of body sherds by individual sherd weight expressed as percentage (e.g. amongst the Hatcliffe group there are 12 sherds that weigh 2g and 17 sherds that weigh 3g representing 10.2% and 14.4% respectively of the sample of 118 body sherds). A greater range of weights would be expected for the Brookenby material as the absolute number of sherds is larger, although the general trend will be readily apparent with such a sample size. The advanced state of breakage at Hatcliffe is demonstrated by the percentages for the low weights (of 1-10grams) where the Hatcliffe sample has higher percentages in eight of the ten lowest weight categories compared with Brookenby and of the other two categories one shows equivalence; only the 8g category registers a higher proportion for the Brookenby sample over that from Hatcliffe. One further point can be made. Whilst the average sherd weight for body sherds amongst the Hatcliffe group is 7.1g some 82 sherds (70%) weigh less than the average at 1-6 grams, 31 sherds weigh 8g or more (26%) while 5 sherds (4%) weigh the approximate average for the group.

Figure 11.14 likewise plots the frequency of body sherds amongst the Trench C Ditch [3718] sample at Hatcliffe and that from Brookenby, by individual sherd weight expressed as percentage. The advanced state of breakage at Hatcliffe is again demonstrated by the percentages for the low weights (of 1-7grams in this case) where the Hatcliffe sample has higher percentages in six of the these lowest weight categories compared with Brookenby, with the exception being the 1g category which in fact shows near correspondence.

Table 11.1 Quantitative details of the Late Roman pottery from the Ditch Group at Trench A, contexts (1031), (1047), (1051) and (1061).

Quantity:	Number of sherds	Weight (grams)	Average Weight
Sherd type:			
Rim sherds	17	195	11.5
Body sherds	118	850	7.2
Base sherds	12	432	36.0
Totals	147	1477	10.0

Table 11.2 Quantitative details of the Late Roman pottery from Ditch [3718] at Trench C, contexts (3505), (3506), (3507), (3707) and (3723).

Quantity:	Number of sherds	Weight (grams)	Average Weight
Sherd type:			
Rim sherds	17	387	22.7
Body sherds	133	887	6.7
Base sherds	10	598	59.8
Totals	160	1872	11.7

Table 11.3 Quantitative details of the Late Roman pottery from Layer (3135)/(3136) at Brookenby (Central Lincolnshire Wolds Project).

Quantity:	Number of sherds	Weight (grams)	Average Weight
Sherd type:			
Rim sherds	36	711	19.7
Body sherds	255	3430	13.5
Base sherds	15	1581	105.4
Totals	306	5722	18.7

Volumetric studies enable trends in depositional practice to be discerned by collecting data on the volumes of soil excavated and the presence of finds. This approach enables the quantities of finds, and in particular their relative frequency, to be gaged. The procedure requires the volume of soil excavated to be measured per context, by establishing the quantity removed in terms of cubic metres or litres (via a bucket/barrow count where the volume held by these units is known). The method was employed at two Roman sites in East Yorkshire, namely the roadside settlement of Shiptonthorpe (Eastaugh *et al.* 2006) and the rural complex at Hayton, Burnby Lane (cf. Millett and Woodhouse 2015). The method was also undertaken previously for this wider Project, at the Nettleton/Rothwell Roman roadside settlement (Willis 2013, 9.6.3). Qualifications over the exactitude of the method should be recognized and so the data on excavated volume should be understood as an approximation (as noted by Millett and Woodhouse 2015, 459); nonetheless the data enable a view upon site formation that is not otherwise possible, nor common practice. The data forthcoming from the Hatcliffe Top excavations is presented in Tables 11.5-11.10. Herein ratios of pottery and animal bone (by weight and count as recorded at the initial post-excavation stage) are established per litre of soil excavated. Volumes of soil were not recorded for every context (such as cleaning layers) nor are all excavated contexts with recorded volumes included in the tables. The latter include some Medieval furrows and deposits of small volume such as Gully [4035] of phase 1 at D which yielded a number of finds but the context volume at under 20 litres was too small to meaningfully include in the analysis). It was decided not to record the volumes of excavated features at the western end of Trench C although such information would have been useful considering the wide range of feature types and depth of sequence at this location (with five stratified phases). Some contexts and features

Table 11.4 Comparison of the proportions, by percentage, of Late Roman pottery samples from stratified contexts by different sherd types. Glebe Farm data pers. comm. Peter Didsbury (Didsbury nd).

Sample Source:	Hatcliffe Top Trench A Ditch Group Fills	Hatcliffe Top Trench C Ditch [3718] Fills	Brookenby Trench C Layer (3135)/(3136)	Glebe Farm, Barrow upon Humber A11
Sherd type:				
Rim sherds	11.6	10.6	11.8	16.9
Body sherds	80.2	83.1	83.3	74.0
Base sherds	8.2	6.3	4.9	8.9
Handle sherds	0.0	0.0	0.0	0.2
No. of sherds in sample	147	160	306	6824

are amalgamated in the tables for convenience and to establish larger sample sizes. Tables 11.5-11.10 thereby present a sample including the main contexts excavated in Trenches A-E between 2007-2010 (note that the phases are specific to each trench, and not precisely equivalent chronologically between trenches (cf. Chapter 4)). All contexts are of later Roman date, except the unphased shallow pit at B, the Medieval furrows at C, and the flue fills at A and certain gullies at B which have some Anglo-Saxon elements where the latter lies in contemporary scoops or fills Late Roman features, quite typical of surviving deposits of that era seen elsewhere.

One of the aims of the volumetric analysis undertaken at Shiptonthorpe and Hayton was to establish trends through time by gross feature type with both sites having sequences covering a longer chronology than at Hatcliffe Top. At Hatcliffe, though the Roman activity is all of the later Roman period the phases of remodelling and reinstitution create a framework background from which to view deposition. The spread of trenches at Hatcliffe enables a picture to be established from samples drawn from across at least part of the Roman era site.

Factors behind deposition will be complex and often unknowable but data of this type can provide an important means to engage with depositional processes and practice. At Shiptonthorpe a fairly regular pattern over time was discernible but at Hayton the pattern through time was less regular (Millett and Woodhouse 2015, 460). The frequency of finds was lower at Hayton than Shiptonthorpe and by context type it was apparent that cut features were the main receptacles for deposited material. At both East Yorkshire sites there was more variety in context types than at Hatcliffe Top where few post holes, occupation surfaces/layers and pits were encountered though on the other hand there was a similar density of features between these three sites. The value of conducting these studies is two-fold: for their potential to shed light on the 'life and times' of the site and also to provide information that might be useful for reference by future researchers, not least when equivalent information is collected during fieldwork.

Table 11.5 shows the data by weight for Trench A contexts. The overall ratios show the frequency of pottery and bone deposits is comparatively high with animal bone tending to be more frequent through the

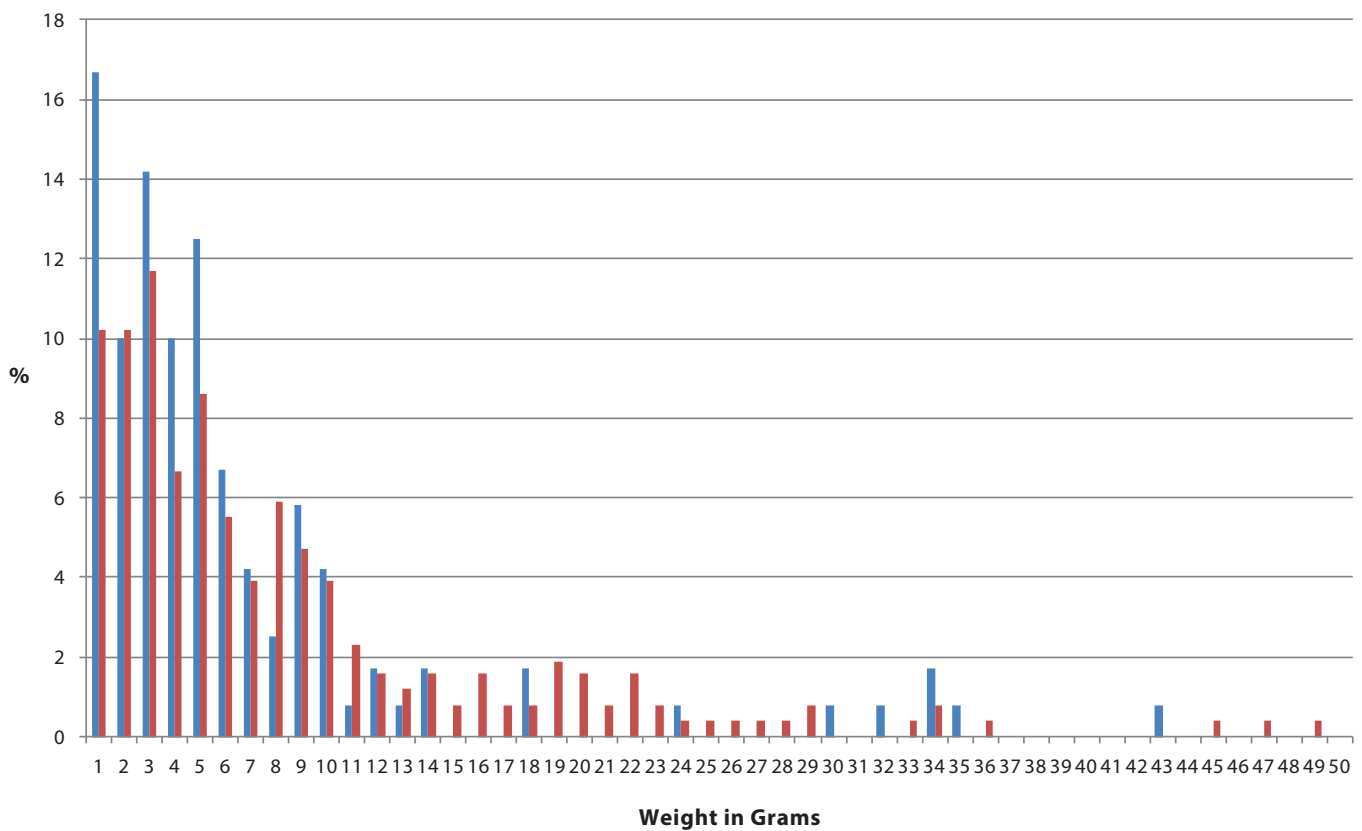


Fig. 11.13 Graph plotting the Late Roman pottery body sherds from the Hatcliffe Trench A ditch group (Blue) and the contemporary layer (3135)/(3136) at Brookenby (Red): frequency by sherd weights, standardized as a percentage of the group size (i.e. number of sherds per gram weight as a percentage of the group total: n=118 and n=255 respectively. Graph truncated at 50grams).

phases than pottery. A high ratio of pottery came from the arcing gully [1009]/[1046]. The flue fills include some Anglo-Saxon material, that being the result of sinkage, scoops or filling open features that are Late Roman in origin. Trench B overall shows lower frequencies than at Trench A (Table 11.6). Bone ratios are high for the gullies of phase 3 which interestingly also have an Anglo-Saxon component (cf. Chapter 4). Data for Pit [2044] are included as it produced the possible stylus Item 55 RF 13. Trench C shows comparatively high frequencies overall, similar to Trench A. The ratios at Trench C are high through all phases (Table 11.7). By contrast the sample from two of the Medieval furrows shows very low frequencies where these items will be largely residual Roman and early Medieval material, subject to attrition from ploughing.

Table 11.8 shows the earliest feature at Trench D, namely the mid- to Late Roman ditch and its later recut [4075]/[4021] of Phase 1, produced small groups of pottery and animal bone from the various fills despite their substantive nature. This picture is confirmed by the volumetric analysis. Several of these ditch fill contexts contained no finds and the

pattern from individual contexts with finds was broadly similar for the two sub-phases (the primary and secondary ditch cuts). In Phase 2 the Late Roman Stoking pit [4062] produced frequency of pottery sherds and animal bone values near the mean for this trench doubtless as it accumulated site rubbish/debris following its abandonment. Its Flue [4058] perhaps initially remained intact and collapsed later, leaving little chance to accumulate other subsequent material. The likely rake-out layers of Phase 3 despite their large volumes have similar frequencies of pottery and bone per volume, but the Stoking pit of this phase [4028] has lower ratios than the equivalent pit of Phase 2. This fact makes the presence of several Late Roman coins in this feature especially noteworthy (Chapter 4): were they intentionally deposited therein or from a lost purse? The gullies of this Phase have a strikingly consistent pattern of high ratios of animal bone, and in the case of [4079] pottery. The ratios for the Phase 4 Ditch [4031] are modest, similar to those for the layers of Phase 3 suggesting a casual accumulation rather than any deliberate dumping, probably as the site was passing out of use during this time.

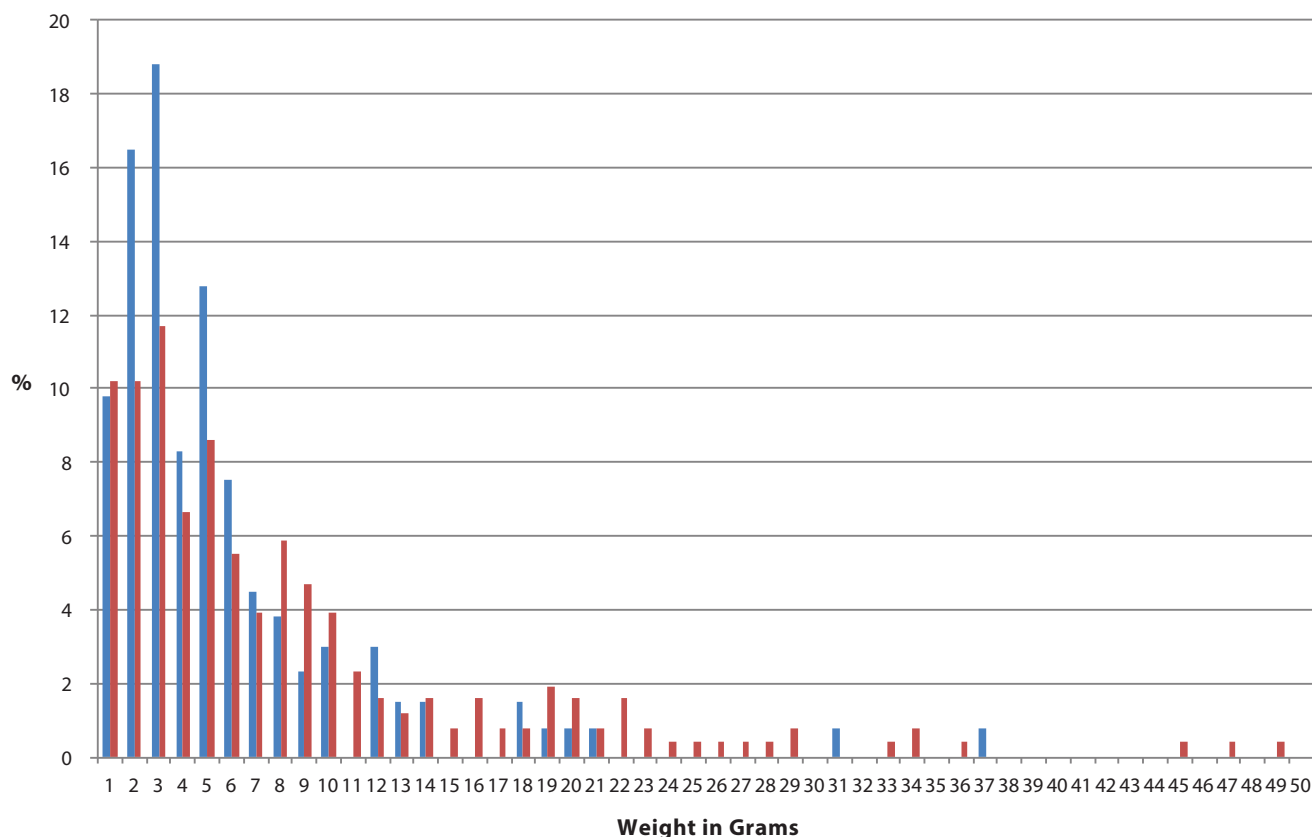


Fig. 11.14 Graph plotting the Late Roman pottery body sherds from Hatcliffe Trench C Ditch [3718] (Blue) and the contemporary layer (3135)/(3136) at Brookenby (Red): frequency by sherd weights, standardized as a percentage of the group size (i.e. number of sherds per gram weight as a percentage of the group total: $n=133$ and $n=255$ respectively. Graph truncated at 50grams).

Table 11.9, showing data from Trench E, emphasizes the infrequency of pottery from this trench. The frequency of animal bone in the fill of the earlier cut of the Ditch [5022] is relatively high as noted in the discussion (Chapter 4); presumably more of this deposit had existed but was removed by the re-cutting (only part of the lower fill and western edge of this earlier cut survived). The ratios for (5001) are representative of the picture with the other sections of this ditch fill excavated at E. There was some intrusive material in (5007) and so it is not included in this analysis.

Table 11.10 shows volumetric data where count is the measure of quantity. Some volumetric data by this method was presented in the case of the roadside settlement at Nettleton/Rothwell (Willis 2013, tables 9.1 and 9.2). There is a drawback with count data as it will be impacted by how vulnerable the material is and in turn how broken it is and so has a taphonomic factor that the weight data used in Tables 11.5-11.9 does not have. The pottery sample from Ditches [3026], [3027] and [3029] shows a high value but this is in part due to the advanced fragmentation of

sherds from fill (3004); that said, this was a deposit rich in other material as it also produced over 250 oyster valves. Nonetheless, these data provide a view of frequency that complements the previous tables. The table indicates pottery to be a more frequent find at Trenches A, B and C, much less so at D and E. The same is true with regard to the frequency of animal bone fragments though the strong presence of faunal remains in the gullies at Trench D is again highlighted (cf. above).

On the whole these data appear to confirm patterns suggested by other archaeological data: Trenches A and C were areas of intensive use and activity with associated detritus accumulating in features and layers (where the latter occur). Trench B and particularly E are towards the edge of the activities and have less features and not especially high frequencies of material. Trench D has a particular character with its Phase 1 ditches being probably on the margins of activity at that time while later it was used as a processing area, perhaps as it was near the margin of the complex (this functional aspect explains the comparatively few oyster shells

Table 11.5 Pottery and animal bone frequency at Trench A by unit volume using weight data by grams.

Feature/Context	Trench Phase	Unit volume (litres)	Weight of recovered pottery	Pottery weight / volume ratio	Weight of recovered animal bone	Animal bone / volume ratio
Layers 1049, 1050	1	168	174	1.03	18	0.11
Ditches [1052] & [1062]	1 or 2A	603	415	0.69	747	1.24
Scoops & Post Holes	2	36	11	0.30	7	0.19
Gully [1009]/[1046]	2A	282	1152	4.08	213	0.75
Ditch [1048]	2B	735	277	0.37	511	0.69
Ditch [1068]	2C	1770	806	0.45	1996	1.13
Scoops [1006]/[1021]	2 or 3	207	73	0.35	158	0.76
Flues [1012]&[1028]	2-3	515	590	1.14	1722	3.34
Totals		4316	3498	0.81	5372	1.24

Table 11.6 Pottery and animal bone frequency at Trench B by unit volume using weight data by grams (up: unphased).

Feature/Context	Trench Phase	Unit volume (litres)	Weight of recovered pottery	Pottery weight / volume ratio	Weight of recovered animal bone	Animal bone / volume ratio
Gully [2030]	1	438	152	0.34	183	0.42
Ditch [2006]	2	1974	795	0.40	1911	0.97
Ditch [2034]	2	360	323	0.89	378	1.05
Gully [2007]/[2020]	3	138	76	0.55	224	1.62
Gullies [2009], [2011], [2013], [2022], [2024]	3	365	131	0.36	1221	3.34
Pit [2044]	u/p	15	14	0.93	2	0.13
Totals		3290	1491	0.45	3919	1.19

forthcoming from the trench compared to other trenches (see Table 8.22) with those present seeming to represent ‘background noise’). On the whole the deeper linear features (ditches) have relatively moderate finds frequencies perhaps because they were maintained during the life of the site, rather than used for dumping waste. This itself points to such material being removed to middens. At the end of their use, and subsequently, they may well have filled with essentially residual material and earth-bank soils created from the original up-cast and re-cuttings. By contrast shallow linears (gullies) tend to have higher ratios of finds frequency suggesting they were not maintained over a long period and

could be used for casual disposal of smaller quantities of ‘rubbish’. At D there may have been re-cutting but not in the exact same locations (cf. Chapter 4). Flues such as [3050] at C (and [3739] with its oyster shell cache) could be used for disposal of rubbish if the superstructure had collapsed. Shallow scoops and short gullies, particularly over the top of Roman features or accumulation in unfilled Roman features are associated in a few isolated instances with Anglo-Saxon material which, on limited evidence, sees a high frequency of bone deposition. The latter are intriguing and more of this evidence would have been welcome, though seems characteristic of this era (Section 6.2).

Table 11.7 Pottery and animal bone frequency at Trench C by unit volume using weight data by grams.

Feature/Context	Trench Phase	Unit volume (litres)	Weight of recovered pottery	Pottery weight / volume ratio	Weight of recovered animal bone	Animal bone / volume ratio
Oven Flue [3050]	1	716	754	1.05	1564	2.18
Ditches [3035] & [3037]	1-2	372	224	0.60	613	1.65
Post Settings [3025]/[3031]/[3033]	2	732	1011	1.38	787	1.07
Ditches [3026], [3027] & [3029]	3	744	1518	2.04	1018	1.37
Medieval Furrows [3021] & [3022]	5	642	112	0.17	34	0.05
Totals		3206	3619	1.13	4016	1.25

Table 11.8 Pottery and animal bone frequency at Trench D by unit volume using weight data by grams.

Feature/Context	Trench Phase	Unit volume (litres)	Weight of recovered pottery	Pottery weight / volume ratio	Weight of recovered animal bone	Animal bone / volume ratio
Ditch [4075]/[4021]	1	2700	279	0.10	587	0.22
Stoking pit [4062]	2	1320	435	0.33	669	0.50
Oven flue [4058]	2	870	68	0.08	85	0.10
Layer 4002	3	1308	547	0.42	485	0.37
Layer 4017	3	708	242	0.34	331	0.46
Layer 4037	3	264	149	0.56	166	0.62
Layer 4038	3	372	229	0.61	167	0.44
Stoking pit [4028] (lower fills)	3	216	74	0.34	35	0.16
Oven flue [4086]	3	1308	65	0.05	469	0.36
Gullies [4004], [4006], [4042], [4091]	3	696	299	0.43	1157	1.66
Gully [4033]	3	112	15	0.13	280	2.50
Gully [4079]	3	204	611	2.99	688	3.37
Ditch [4031]	4	1410	237	0.17	728	0.51
Totals		11488	3250	0.28	5847	0.51

The overall picture emphasized by the plots of the spatial occurrence of artefacts and the tables showing frequency of the finds, is the sheer spread of material in variety and some quantity. All excavated trenches located earth-fast features and all produced finds. Even Trench F, in the heavily truncated area off the plateau, seemingly beyond the enclosed area of the Roman site, was the location for ploughsoil finds. The ditch revealed in F was a rare case of a feature barren of finds (though not a great volume of fill was available to sample. Otherwise Trenches A-E yielded groups of Roman and some Anglo-Saxon material and no trench or area was meagre in terms

of forthcoming material; even at E on the margin of the site the bone frequency for the earlier ditch cut produced a volume frequency ratio comparable to that of samples from other trenches. Finds categories typical for a later Roman rural site in the East Midlands proved to be widespread across the site. That said few deposits were at all prolific (exceptions being (3004) and (4016)). Trench A with its extant surfacing and varied and frequent finds profile looks likely to be close to a building or intense activity area. Elsewhere layers and made surfaces are likely to have existed in the Roman era, probably including rammed chalk, laid over the clay till natural carpet

Table 11.9 Pottery and animal bone frequency at Trench E by unit volume using weight data by grams.

Feature/Context	Trench Phase	Unit volume (litres)	Weight of recovered pottery	Pottery weight / volume ratio	Weight of recovered animal bone	Animal bone / volume ratio
Ditch [5022] fill (5018)	1A	220	2	0.01	419	1.90
Ditch [5003] fill (5001)	1B	1255	130	0.10	595	0.47
Totals		1475	132	0.09	1014	0.69

Table 11.10 The frequency of pottery sherds and bone fragments amongst various excavated contexts, Trenches A-E; (frequency per 100 litres, with values rounded-up to whole numbers).

Feature/Context	Trench Phase	Litres Excavated	Number of Pottery Sherds	Sherds per 100 litres of deposit	Number of Bones / Bone Fragments	Bones / Bone frags per 100 litres of deposit
Ditch [1052]	1 or 2A	549	32	6	96	17
Ditch [1048]	2B	735	30	4	19	2
Ditch [1068]	2C	1770	92	5	9	0
Gully [2030]	1	438	21	5	23	5
Ditch [2006]	2	1974	87	4	260	13
Ditch [2034]	2	360	36	10	29	8
Oven Flue [3050]	1	716	59	8	181	25
Ditches [3035]&[3037]	1-2	372	35	9	18	5
Post Settings [3025]/[3031]/[3033]	2	732	68	9	63	9
Ditches [3026], [3027] & [3029]	3	744	160	21	82	11
Ditch [4075]/[4021]	1	2700	31	1	51	2
Oven [4062]/[4058]	2	2190	61	3	55	2
Layers (4002), (4017), (4037) & (4038)	3	2652	102	4	146	5
Gullies [4004], [4006], [4042] & [4091]	3	696	32	4	129	18
Ditch [4031]	4	1410	44	3	61	4
Ditch [5022] fill (5018)	1A	220	1	0	15	7
Ditch [5003] fill (5001)	1B	1255	16	1	174	14

(treacherously slippery when wet). These layers have been lost through the scouring of Medieval cultivation and modern ploughing, and finds in such contexts included in the modern ploughsoil. In such a dynamic context, exposed to frosts, weathering, machine vehicle weight, plough blades and agricultural chemicals and biological processes finds will be abraded and lost (especially bones, antler, worked bone and shells). The lack of stratified contexts with high frequencies of finds is probably explained by regimes during the life of the site designed to maintain it and keep it clean. Moreover detritus would probably have been collected in middens to use in fertilizing the fields. Such middens, being positive, above ground features, are often lost from the archaeological record and their contents dispersed in modern topsoils and ploughsoil (Haselgrove 1985). The wide spread of metalwork and coins, together to some extent with the pottery, collected from the fieldwalking, to the south of the area examined by the excavated trenches might be explained by contemporary activity across this area (as implied by the geophysical results) and the incorporation of midden material into (ultimately) modern ploughsoil. It is no wonder the metalwork recovered from systematic detecting includes a high proportion of bent and fragmentary material: testimony to the biography of the site through the prism of centuries of deleterious processes.

11.6 Environment and Economy

The economy of the site at Hatcliffe Top can be understood from the recovered assemblages of faunal remains, charred plant matter, marine molluscs, coins and artefacts, pottery and certain other categories such as coal. These remains shed light on key aspects such as productive activities, diet, exchange and connections, logistics, and consumption choices. The picture relies on what has survived and been recovered, and so the record to hand is limited by those endemic aspects of the archaeological process. The evidence points foremost to the site being very much focused on agriculture with the landscape environments around the site being a key asset and determinant. The morphology of the site in the later Roman era is consistent with that of other sites of the period known to be agriculturally focused (Section 11.3.2). The material remains and themes under the spot light in this Section also relate to other spheres of the nature of the site and its community and these are examined in turn in subsequent sections.

11.6.1 Livestock and Animals in the Site Economy

Livestock raising is likely to have been a mainstay of the purpose and economic functioning of the community at Hatcliffe Top. Rackham points out that the faunal record for the site represents consumption by the inhabitants, whereas what was raised and sold on will not leave a trace, so there remains the common uncertainty over what is present in the recovered faunal assemblage and what might have been produced. In summarizing the faunal evidence he concludes that cattle were the main livestock and were the most important meat source. Judging from the available sample they were probably exploited for multiple purposes: meat, milk and its secondary products, skins, horn, manure, bone extracts etc. at the site and as traded products (Section 8.5). From deduction based on age structure sheep were raised mainly for wool. There is some likelihood too that horses were raised (Chapter 8). Equids were also comparatively well-represented amongst the small samples dating to the Roman era from the course of the Covenham to Boston pipeline (Hadjikoumis forthcoming).

The location of the site at the border of different landscape zones will have offered a variety of options for mixed farming, with cattle and horses grazing on meadows in the valley of the Waithe and on the Marshland a distinct probability, and with an arable and fodder focus on the drier uplands of the adjacent Wolds, and use of the valley slopes for pannage and wood for fuel etc. The use of these different environs is shown by the presence of weed species caught as carbonized plant fractions amongst the bulk soil samples from the excavations. The weed seeds present include species indicating local environments of disturbed (cultivated) and waste ground, moorland habitats and areas of damp ground. It is also suggested in the interpretation of the geophysical results, indicative of episodes in the morphology of the site controlling stock through 'channels' to and from pasture on and off the Wolds, and in the existence of compounds to hold groups of animals. The snail assemblage from the boundary ditch at Trench E showed that this bordered grassland during the life of the site: presumably grazing on the eastern slope, off the plateau. Who gained from the selling on of animals and animal products is an intriguing question, as is the matter of what level of 'profit' was attained and where that ended up. In sum the faunal assemblage suggests self-sufficiency and surplus, with a rather unvaried diet, indicative of a producer site without wealth, or social pretention to a more

diverse consumption. Yet, perhaps this was a matter of choice. In terms of livestock Hatcliffe Top may well be a typical farm of Late Roman date within the region, supplying distant and regional markets, with cattle becoming more important. Until more sites are examined and published we will not know this for certain but considering the wider picture Hatcliffe is consistent with some recognized trends elsewhere. Further up the valley, the upper fillings of the Neolithic long barrow quarry ditches at Ash Hill and Hoe Hill, dating to the Roman era, produced only cattle bones, in what the pollen data suggest was generally a pasture environment (Phillips 1989a, 187), though the mechanisms and practice behind their inclusion in these deposits may not be neutral factors.

In the wider region, comparative data are available pointing to the importance of cattle. This trend has been observed more widely for this period in central Britain (cf. Allen 2017, 110). The samples available from the region, however, have the proviso that they mainly derive from areas environmentally suited to cattle raising (cf. Maltby 2014), with little data available for the Wolds. From the relatively recent excavations at the Roman Roadside Settlement at Navenby, on Ermine Street south of Lincoln, located on the Jurassic Limestone, specifically at Chapel Heath, the faunal assemblage amounted to 3646 bones/fragments from the excavations (40515g), plus 485 items (94g) from bulk soil samples (Wood 2011). On the basis of this sample Wood was confident that sheep/goats were the main focus of the animal economy, with the sheep/goat age profile suggesting wool production was important. The limestone plateau setting was likely heathland with water availability and so the environment suited sheep/goats (Wood 2011, 124). Cattle too were important (Wood 2011, tables 5.2 and 5.4). The latter were mainly skeletally mature with Wood suggesting perhaps there was more use in traction in the second to third century phases, with greater emphasis on meat exploitation in the fourth century (Wood 2011, 119). There was no evidence for trading meat joints onto or off site and thus any trade was 'on the hoof' (Wood 2011, 121), and probably sent to Lincoln (Wood 2011, 124). Average cattle sizes in the third and fourth century were comparable with those at Lincoln (Wood 2011, 117) suggesting Navenby beasts were regionally typical. Pigs accounted for only 2% of the sample with a possible increase in importance towards the end of the Roman era (Wood 2011, 121); this low proportion may have reflected traditional preferences though Wood suggests it may point to limited woodland. Overall, Wood saw this assemblage as typical of rural Lincolnshire. A broadly similar picture can be seen in the faunal samples from

Old Sleaford and Long Bennington (Wood 2011, 124) and at Burringham Road, Scunthorpe, in the north-west of the historic county (Yeomans 2009) where cattle bones represented half the identifiable sample and where beef will have been the main meat source. Here again cattle seem to have become more important in the third and fourth centuries where they were presumably raised (Yeomans 2009). Two nearby sites at Old Winteringham and Winterton villa were seen as cattle consumption sites based on data included in the original publication (Higgs and Greenwood 1976; Yeomans 2009, 61). Sheep were raised for multiple purposes (presumably) at the Burringham Road site, for meat, milk, wool, and breeding (Yeomans 2009, 63); pigs were a small but significant contributor to the site diet (Yeomans 2009, table 6). The importance of cattle and low exploitation of pigs was also apparent amongst the samples from the Covenham to Boston pipeline, traversing the southern Marsh, south-east fringe of the Wolds and into the Fens (Hadjikoumis forthcoming). All these cases are consistent with evidence from Lincoln showing an apparent increase in cattle consumption in the later Roman period (Dobney *et al.* 1999, 22).

11.6.2 Cereal Production and Processing in the Site Economy

The plant remains recovered from bulk soil samples from across the site give a detailed and varied picture. Those from some of the ovens/dryers and associated deposits contained rich carbonized cereal grain groups and other components, with moderate quantities of cereal residues also present in most other flots. The individual samples from the ovens/dryers show some contrasting proportions of grains and all may have been used for various stages of 'commercial/trade' rather than 'domestic' crop processing, with collected samples perhaps catching 'final use' debris (Section 8.5). The central western area of Trench D with its dished clay surface may have served as a threshing floor in summer months, lying adjacent to at least one large contemporary dyer [4028]/[4086] (see Section 11.6.3). Samples from deposits other than those relating directly to ovens and processing may be more representative through the general random mix of charred debris they contain (cf. Section 8.5). The overall impression is that barley was the most common cereal type, followed by spelt wheat and free-threshing wheat (Section 8.5). That thirteen ovens/dryers were encountered within three different trenches (A, C and D) is testimony to the importance of crop processing at the site; doubtless there are many more in the area of the site given the

known frequency based on the excavated evidence. Some may have been used multiple times, others once or twice; certainly [4062]/[4058] had some sustained life as it was re-lined, while the two flues at the western end of Trench A show superimposition indicative of ongoing needs. The sample from layer (1054) at Trench A is one of the earliest deposits excavated and was found to contain crop processing remains in the form of weed seeds and chaff demonstrating this activity was already a part of the site economy in the mid-Roman period (probably the second half of the third century). The wheat processed at Hatcliffe Top would most obviously be used for bread and other human consumption. Spelt is widely attested at sites in Roman Britain and Europe and was apparently the staple wheat for bread production, but it is not free-threshing so requires extra work to separate the grains from the spikelets (Dobney *et al.* 1999, 24). The barley may have been used in baking and stews, although it may have been a high quality fodder, not least for horses, or been used for brewing ale. The density of ovens/dryers might imply that crops were taken in at Hatcliffe Top for processing from adjacent farms as a local processing point.

The plant remains from Hatcliffe Top do not include the range seen in a contemporary deposit recorded from the regional centre of Lincoln, where a mid- to late fourth century waterlogged deposit (at Brayford Wharf East), contained a wide variety of preserved remains: coriander, hemp, celery seed and beet, as well as spelt and six-row barley (Moffett 1995). This range is far more exotic in comparison to that known from Hatcliffe Top and points up the likely differences in access, choice and experience in diet between metropolitan centres such as Lincoln and the rural and productive communities of Roman Britain.

There are few published or grey literature sites in the region for which data on cereal and plant species are available. One of the few is the later Roman enclosure site at Hobson Way, Stallingborough, on the Humber Bank (though here, as at Hatcliffe Top, livestock raising will have been an important focus). At this Marshland site charred plant remains recovered were predominantly cereal grains and chaff from oats, wheat and barley, together with pulses in two instances (Field and McDaid 2011, 21). Since arable weeds were present alongside the charred grains it is likely that cultivation was either close by or the cereals arrived on site unprocessed (Field and McDaid 2011, 21). Some barley grains present had started to germinate prior to charring which could indicate on-site brewing, while the proportion of chaff to grain was comparatively high indicating crop processing on site (Field and McDaid 2011, 14).

The stimulus to cereal and livestock production may have been commercial or it may have been the result of a 'command economy' with state intervention: possibly the processed grain from Hatcliffe Top went to the military in the wider region or to centres such as Lincoln. Alcock (2011, 102) states that the first half of the fourth century saw large quantities of grain exported from Britain to support army campaigning beyond the Rhine. These considerations are examined below (Section 11.8).

11.6.3 Crop Processing: The 'Corn-Drying' Ovens and likely Threshing Floor

One of the main feature types encountered at Hatcliffe Top were examples of so called 'corn-dryers', features that may have had various functions in crop processing (van der Veen 1989; Lodwick 2017, 55-61). Although recognized as features related to crop processing for over a century their variations in form, function and survival often complicate interpretation; superstructures have typically been lost, represented at best by fragmentary remains, while fills encountered upon excavation may not inform directly as to use. Their distinction as a category separate from other ovens is not always clear leading Leary, in reporting the site at Long Bennington in the Trent valley, to use the term 'fire pits' as descriptive rather than interpretative (1994, 14). Component elements will be a stoking hole, hearth or 'fire-box' area placed near the stoking hole, and a channel or flue to conduct hot/warm air to a drying chamber through a floor. They are particularly prominent through the third and fourth centuries across southern and eastern England, often being seen as indicative of agricultural diversification in response to state, tax or population demands (Frere 1987, 260, 270-1; Millett 1990, 203-4). 'Corn-dryers' have received attention in a number of reviews in the past few decades (Morris 1979; van der Veen 1989; Taylor 2007; Proctor and Taylor-Wilson 2009). Proctor and Taylor-Wilson (2009, 29) detail and discuss the reasons and mechanics of their potential roles in drying and roasting cereal grains and why this was so broadly undertaken, largely for crop preservation, ease of de-husking and for malting. Accordingly, these aspects are not rehearsed here. Ovens and corn-dryers are known from a number of sites in Lincolnshire, such as Old Sleaford (Elsdon 1997) and Winterton (Stead 1976; Goodburn 1976). In addition to Hatcliffe Top, two sites examined as part of the Central Wolds Project have yielded examples. One likely dryer was represented at Mount Pleasant (Willis 2013, section

3.3.10), while six occur at Trench C at Brookenby (Willis forthcoming b); see Fig. 11.19. They are fairly common in the East Midlands, and as elsewhere dating particularly to the Late Roman era (Monkton

2006). The Rural Settlement of Roman Britain Online Resource (via the ADS), drawing on grey literature and contract archaeology records plus some other key site publications, lists thirteen sites in Lincolnshire with

Table 11.11 Summary of Ovens/Corn-dryers excavated at Hatcliffe Top. Stoking pits are recorded separately in italics where substantial (*only partly caught within Trench; + truncated; * width of original cut; SP Stoking Pit; measurements in metres). For further details see Chapters 4 and 8.

Feature	Trench Phase	Evidence of use	Length / diameter	Width	Depth
Trench A					
[1012] * Flue	Phase 2	Scorched clay lining. Structural fired clay and mixed burnt debris in fill	2.00	0.40-0.50	0.30+
[1057] * Flue	Phase 2	Scorched clay lining. Structural fired clay and mixed burnt debris in fill. Charred cereal grain and flax present	2.00	0.40	0.43+
[1028] * Flue	Phase 2	Scorched clay lining. Structural fired clay and mixed burnt debris in fill	2.20	0.56	0.25
Trench C					
[3050] * Flue	Phase 1	Scorched clay lining. Structural fired clay and some mixed burnt debris together with coal and cereal grains. Fill was probably mainly secondary deposition	3.80	1.20	0.23
[3511] / [3515] Flue	Phase 1	Scorched clay lining. Structural fired clay and mixed burnt debris in fill. Basal layer of soot/ash and carbonized debris. Charred cereal grains	2.40	0.44-0.70	0.44
[3739] Flue	Phase 3	Scorched clay lining. Structural fired clay and mixed burnt debris in fill. Basal layer of soot/ash, fuel ash slag and carbonized debris. Coal from upper fill. Charred grains and plant remains	1.20	0.60	0.30
[3780] SP of [3739]	Phase 3	<i>As [3739]</i>	0.40	0.40	0.25
[3745] Flue	Phase 3	Scorched clay lining. Structural fired clay and mixed burnt debris in fill. Coal from upper fill. Rich in charred plant remains, including cereal grains	2.00	0.60	0.47
[3516] SP of [3745]	Phase 3	<i>Fill included mixed burnt debris</i>	0.56	0.56	0.27
[3751] Flue	Phase 3	Scorched clay lining. Structural fired clay and mixed burnt debris including coal in fill	0.80	0.54	0.50
[3752] SP of [3751]	Phase 3	<i>Charcoal and fired clay fragments and flecks</i>	0.65	0.52	0.25
[3759] / [3781] Flue	Phase 3	Scorched clay lining. Quern C5 forming a part of the edging. Structural fired clay and mixed burnt debris in fill. Charred plant remains including cereal grains	1.70	0.46	0.27
(3551) Oven	Phase 3	Stone structure inc. Quern C4. Fuel ash slag, coal and charred grains in fill	0.55	0.50	0.17
Trench D					
[4058] Flue	Phase 2	Scorched clay linings. Relined structural fired clay and mixed burnt debris in fill. Basal layer of soot/ash and carbonized debris. Rich in charred plant remains	3.00	1.00	0.70
[4062] SP of [4058]	Phase 2	<i>Structural fired clay and mixed burnt debris plus coal in fill. Querns D1-D6 placed at the threshold of the flue</i>	2.60	1.50	0.85
[4086] Flue	Phase 3	Stone lining. Structural fired clay and mixed burnt debris in fill. Coal and burnt wood from lower fill. Rich in charred plant remains	3.60	1.15-1.30*	0.85
[4028] SP of [4086]	Phase 3	<i>Structural fired clay and mixed burnt debris including fuel ash slag in fill</i>	2.00-1.50	1.10	0.80

such features; although this is not a definitive list it indicates the features are widespread and not infrequent (by comparison 13 sites are listed for North Yorkshire, 10 in the case of East Yorkshire and 20 for Hampshire).

As mentioned, various factors have been highlighted to account for the frequency of such dryers in the Late Roman period in Britain. One presumption is that greater quantities of cereal grain were being produced and/or needed drying in the sporadically damp British climate, that may have been deteriorating during this time (Proctor and Taylor-Wilson 2009, 32-3;

but see Lodwick 2017, 59). A drive to agricultural diversification in the later Roman era is also recognized, including, it is supposed, the production of secondary products such as ale and malt vinegar for pickling (both from cereal malt), in part at least spurred by the need to meet increased taxation (Jones 1981; Millett 1990, 205; Proctor and Taylor-Wilson 2009, 63). A change in the method of harvesting with removal of the grains only and, thereby, not leaving cut crops to stand and dry in the fields in sheaves may also be a factor (Lodwick 2017, 47).

Table 11.12 Incidence of fired daub with withy rod impressions present at Trenches A and D. For brevity only fragments with more than one rod impression and/or with measurable diameters are listed. Wt. = weight of fragment; Imp. = rod impressions; Orient. = orientation of the rod impressions; 1 Perp. = one rod (for example) perpendicular to others; approximate diameters given where measurable; Woven = rods appear woven behind or in front of another perpendicular; Layered = the rods appear straight at different levels within the clay; * this may be a tie of organic material now leaving a void. Each row is a separate fragment.

Context and Trench Phase	Wt. (g)	No. of Imp.	Orient.	Diameter of Impressions
A. (1081) Phase 2 Fill of Flue [1012]/[1057]	117	1	-	15mm
	17	1	-	16mm
	6	1	-	13mm
D. (4000) Ploughsoil	27	3	Parallel	
	5	1	-	14mm
	7	1	-	13mm
	33	3	1 Perp.	
	37	2	Parallel	1 x 18mm
(4002) Phase 3 Sooty layer	7	1	-	15mm
	12	1	-	14mm
(4061) Phase 3 Fill of Flue [4086]	38	4	2 Perp.	4 x 15mm
	36	2	1 Perp.	
	112	4	2 Perp.	Layered: 12 & 19mm; 18 & 20mm
	15	3	1 Perp.	Layered: 1 x 13mm
(4071) Phase 3 Fill of Flue [4086]	378	4	1 Perp.	1 perp. = 30mm. Other three woven: behind, in front, behind the Perp. rod
	382	5	2 Perp.	Layered; not woven. 21 & 32mm; 14, 9* & 14mm
	37	2	Parallel	1 x 15mm
	56	2	Parallel	13 & 17mm
	40	1	-	14mm
	59	3	1 Perp.	Woven: 1 rod 13mm, woven behind another 18mm
	405	6	1 Perp.	Woven. 1 x 19mm; 1 x 18mm
	264	4	Parallel	Woven: behind, in front, behind, in front. All 17mm
	175	3	Parallel	Woven: behind 19mm, in front, behind 18mm
(4036) Phase 4 Fill of Ditch [4031]	17	2	Parallel	
	16	2	Parallel	
	22	2	Parallel	
	13	1	-	15mm

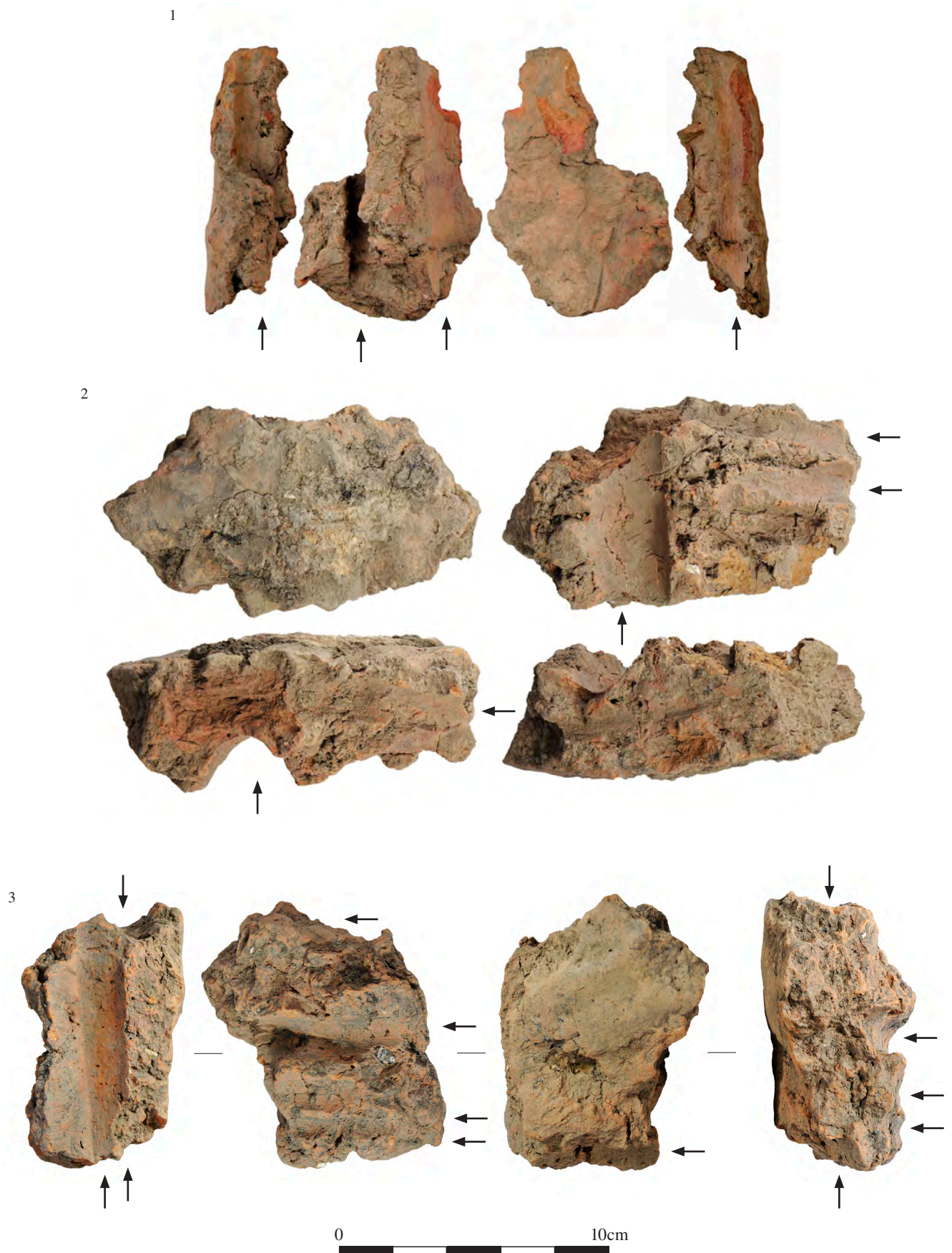
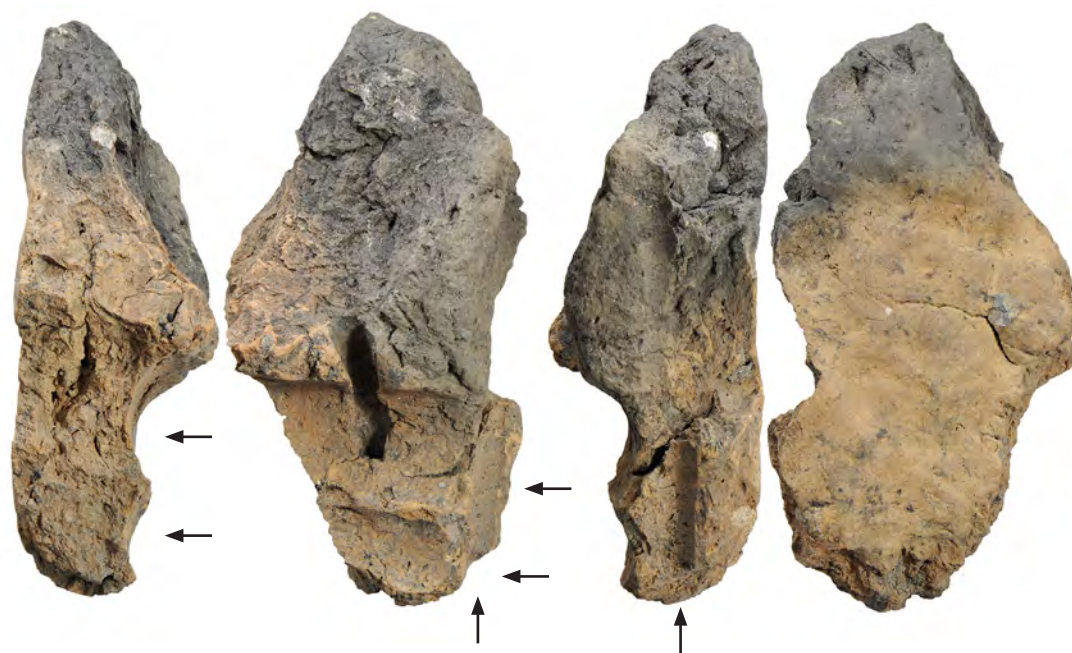


Fig. 11.15 Fragments of structural fired clay with wooden rod impressions (indicated by arrows) from the Flue [4086] at Trench D, contexts (4061) and (4071).

4

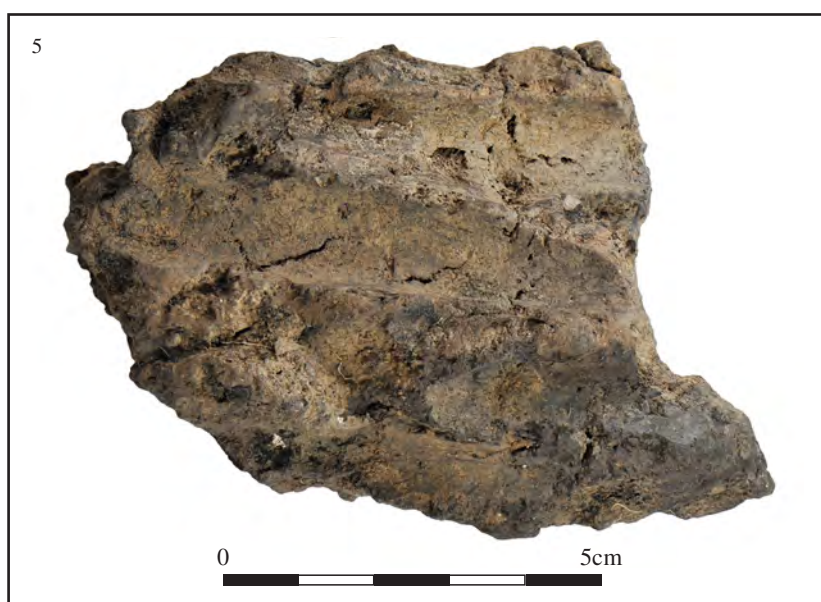


5



0 10cm

5



0 5cm

Fig. 11.15 Fragments of structural fired clay with wooden rod impressions (indicated by arrows) from the Flue [4086] at Trench D, contexts (4061) and (4071).

Within the region these features show variation in size and form; some were fashioned with planning and considerable investment of labour while others were more improvised, doubtless as need arose and reflecting functional purposes. A number of such features from the region were located within structures, particularly as an activity occurring late in the use of the building, indeed, possibly when the structures were repurposed or in decay. None of the ovens and dyers at Hatcliffe Top appears to have been inside a building or cover.

At Hatcliffe Top eleven features of this type, plus a likely oven were examined, while a further 'dryer' (at Trench D) seems likely (under (4077) cf. Chapter 4). From the geophysical survey the area around Trench D could have several more corn-dryers given the anomalies indicated are similar to those shown on excavation within D to be corn-dryers. It is likely that other dryers occurred in and around the rectilinear enclosure complex in the western half of Corner Field. This demonstrates that the site was an important complex for bulk processing of cereals for market. Table 11.11 lists these features, their dimensions and the character of associated fills etc. This enables some comparison with features of likely similar purpose from the area. Of the examined features only one had any coarse structural elements: [4028]/[4086] at Trench D, probably as this was the largest dryer, yet whilst suitable constructional stone was not readily to hand at the site the other examples did not require coarse building material as the natural clay till into which their flues and stoke pits were cut was firm enabling stable forms to be readily fashioned.

Three fragments of fired clay from Trench A and 32 fragments from Trench D preserve the impressions of wooden rods, circular in section, likely to represent daub applied to a framework for flooring and/or superstructure related to the corn-dryers. The three fragments from Trench A together with 24 fragments from Trench D, being the better preserved material, are listed in Table 11.12. There were no like items from the other trenches. The rod impressions (sometimes referred to as sails) suggest a framework of woven and perhaps layered coppiced withies with local clay applied systematically by hand. Evidence for the 'weave' mirrors that of hurdling where the rods are alternately behind and in front of a thicker rod (cf. Poole 1984, fig 4.74; Wastling 2009a). This round wood will derive from coppicing, most probably of willow or perhaps hazel. Extant original surfaces show irregular smoothing by hand, (perhaps gloved hand) and some wiping, probably with split wood; one fragment from (4002), without rod impressions (so not certainly from the same type of structure, though otherwise

qualitatively similar), has extant original surfaces on opposite sides and is 33mm thick which is thinner than all the larger fragments from the flue [4086] which are over 60mm thick. The latter may be from flooring and the former from the upper structure. Of the rod impressions the diameters of 38 can be established. 34 of which are 19mm or less, with two at 20 and 21mm and a further two at 30 and 32 mm (Table 11.12). Of those rods at 19mm or less the majority lie in the range 13-15mm with only one example less than 12mm and this may be the impression of a tie as the bend impression is very acute, although that may simply be a function of its flexibility at that narrow diameter. The two rods at 20mm and over are simply at the top end of the normal range, with the two impressions at 30 and 32 mm clearly forming the basic structure or sails of the frame/s against which the narrower rods are woven or layered. The presence of these pieces at A and D within flues mean that there is a high probability that the pieces are from the floor/s and superstructure of these respective dryers. These elements will have been dried and hardened before the use of the dryer, perhaps through an initial heating. Possibly these elements have survived as they were nearest the fire-box within the flue. The fragments are variably oxidized but on the whole there are less unoxidized fractions suggesting exposure to low heat. At D more fragments may be contained in the part of the fill of [4086] left *in situ* for reasons of preservation (cf. Chapter 4). No such fragments were found with the other excavated dryer at Trench D and so either temperatures reached did not lead to 'firing' of a similar framework, or the superstructure was removed (with any fired pieces used perhaps for surfacing material). In terms of the sequence the fragments at Trench A from [1012]/[1057] were of Trench phase 2 (so late in the sequence). At Trench D the fragments occur in Trench phase 3 and later deposits, with the largest fragments from fills of the dryer flue [4086] (Fig. 11.15), others come from the top sooty layer of phase 3 (4002) and the fill of the phase 4 ditch to the south, possibly originally deriving from [4086] or another dryer. Similar fragments were recovered at Burringham Road, Scunthorpe, in association with 'corn-dryers' (Darling 2009, 42-3) though apparently there was less than the group from Trench D. The rod diameters at Burringham Road were similar at 13-20mm and again floor and framework structuring is suggested, but there appears to be no direct evidence in this case for cross layering or woven withies, perhaps due to limited survival; pieces were 35-75mm thick, mainly 50-75mm thick but as at Hatcliffe Top are mostly fragments with at best one original surface surviving per fragment (Darling 2009, 42, fig. 47.5).

From (4071), at the base of the flue [4086] came some carbonized wood fragments (c. 500g) the larger pieces of which were identified by Damian Goodburn (pers. comm.) as oak. This might represent fuel, maybe off-cuts or scrap timber, for firing this large dryer, or possibly this is from a more robust timber framework that became burnt during the use of the feature. Coal was recovered from fill layers in several of these features though it seems unlikely it was necessary to use coal as a fuel for these dryers for crop processing, as only moderate heat was required. The coal present therefore could be 'background noise' given that in all cases it is not present in any large quantity (Table 11.14).

Examples of corn-dryer features occur at Hibaldstow, Winterton and Burringham Road, Scunthorpe, in the north-west of the historic county. The Roadside Settlement at Hibaldstow, on the Lincolnshire Limestone, was excavated in the mid-to late 1970s and an interim report is available. Two features were located in Building VI: a substantive T-shaped stone built oven, thought to be a dryer, inserted into a corner of the building in its later phase and another containing carbonized cereal grains and weed seeds in its flue, but not necessarily indicative of the primary function (Smith 1987, 63-4); spelt wheat, oats and hulled six-row barley were present (Smith 1987, 191). A circular and apparently double flued feature at the same site was also interpreted as more certainly a corn-dryer, containing thousands of charred grains (1987, 63, 193-4); spelt comprised 95% of the seeds while other species included rye, hulled six-row barley, oats, horsebean and Celtic bean (Smith 1987, 193). Five corn-dryers were excavated at Burringham Road, represented by flues of 'cigar' shaped form, as they survive. These are broadly dated to the third century, being of 'bowl furnace' or 'long hearth' type (Boyer *et al.* 2009), comparable to the corn-dryers at Hatcliffe Top morphologically. Corn-dryer 3 at Burringham Road had a bowl at one end and a flue measuring 2.5m by 0.68m; the excavators point up the similar scale of dryers at Winterton, specifically at Building B at the villa (Stead 1976, 90-1). Corn-dryer 4 at Burringham Road, was 2.7m by 1.1m narrowing to 0.6m and like Corn-dryer 3 had some stone lining and scorched sides; two millstone fragments were incorporated into this stone lining. The flues of dryers 1 and 3 at Burringham Road yielded charred wheat and heather twigs. At both sites the orientations vary, indicating that wind direction was not important in creating through-drafts; at both locations the dryers were seemingly outside buildings and both produced evidence for

withy frameworks covered with clay that was then fired, representing superstructure, probably flooring (Proctor and Taylor-Wilson 2009, 31-2).

The work at Hatcliffe Top did not encounter a T-shaped stone built dryer as at Hibaldstow. Building stone was much more readily to hand for the community at Hibaldstow than at Hatcliffe; nonetheless the dryer [4028]/[4086] at D (the largest of the dryers at the site) had a stone lining, incorporating more stone than any other feature encountered, so representing a significant investment.

The apparent oven base formed by a semi-circular stone structure, (3551) in the north-west corner of C, is comparable in scale (at approx. 50cm in diameter) to the size of the prefabricated Late Roman ceramic ovens and baking plates reported by Evans *et al.* (2018). The environmental evidence from the soil sample from the interior included an undiagnostic mix of charred plant remains; the oven may have been cleared out and then not reused or the level of truncation may mean only the base of the structure remained.

At Burringham Road the charred heather, perhaps with turves and maybe peat, was employed as suitable slow burning fuel (Carrot *et al.* 2009), generating heat but not of an intensity that might threaten the drying crop, and perhaps generating smoke. It was suggested that the Burringham Road dryers may have been used for smoking or drying legumes (Proctor and Taylor Wilson 2009, 31). Smoking of meat and cheese could well correlate with the increase in the significance in cattle seen in the later Roman period in Lincolnshire, including Hatcliffe Top. At Hobson Way, near Stallingborough on the Humber Bank, six pit-like features were interpreted as possible ovens/corn-dryers given the presence of quantities of fired clay, charred grain and charcoal with three thought more certainly dryers due to their elongated form (Field and McDaid 2011, 14). At the AMEP2 site at North Killingholme, also on the Outmarsh, a T-shaped 'corn-dryer' has recently been excavated (pers. comm. Chris Casswell). At Site J2 near Swaby on the south-east fringe of the Wolds, six ovens were found cut into the top of a ditch in the Late Roman period (mirroring the practice at Trench D); fuel remains in the form of charcoal was well-represented, with some presence of cereal grains (Bush forthcoming, Chapter 4).

Table 11.13 documents the presence of the main cereal types in the fills of the ovens/corn-dryers. As Giorgi and Rackham make clear the evidence may relate to a variety of factors such as last use, chance circumstances of survival, and so forth and hence

Table 11.13 The qualitative presence of cereals from fills of the Ovens/Corn-dryers excavated at Hatcliffe Top.

Feature	Hulled wheat Spelt	Free threshing wheat	Barley (hulled)
[3050] Flue	Minor		Moderate
[3511]/[3515] Flue	Moderate	Minor	Moderate
[3739] Flue	Present		Present
[3745] Flue	Rich	Minor	Rich
[3759]/[3781] Flue	Present		
(3551) Oven	Present		Present
[4058] Flue	Moderate	Moderate	Rich
[4086] Flue	Minor	Present	Rich
[4028] SP of [4086]	Minor		Rich

interpretation requires provisos (Chapter 8). The general picture points to the importance of spelt and hulled barley and the perhaps routine processing of these grain types.

The excavations at Hatcliffe Top revealed functional zoning in so far as some contemporary features, but in particular repeated ‘corn-drying’ activities, occurred at the same locations: at the western end of Trench A, the western end of Trench C and at D. There was similar clustering at Burringham Road (Boyer *et al.* 2009). This zonation might be expected for a process involving flames and smoke and encumbrance to movement. Mudd *et al.* note that the positioning of dryers is likely to relate to considerations vis-à-vis field access, access to/from storage and other processing facilities (1999, 256). However, there is a trend through the Late Roman era for corn-dryers to be instituted nearer to domestic occupation, while at the same time they tend to be larger and the number appears to decline from a third century peak (Lodwick 2017, 60-1). It is likely that the largest example excavated at Hatcliffe Top, [4028]/[4086] at Trench D, is indeed the latest example.

At Trench D a laid clay surface (4077) of Trench phase 3 was potentially used as a threshing floor. It measured at least 5.5m by 5.5m lying adjacent to a contemporary corn-dryer [4028]/[4086], and potentially others (Chapter 4). The surface was dished, although this may have been due to sinkage into earlier features rather than of purposeful design. The surface lay between two gullies [4006] and [4033] which may have held some form of screening (cf. Chapter 4). Morris records clay surfaced threshing floors (so interpreted) at Ditchley, Oxfordshire, and Lodge Farm, Gloucestershire, 7.5m and 5.5m in diameter respectively, both with stone

kerbing, being in areas with plentiful stone (Morris 1979, 109-11). At Welton Wold, East Yorkshire, the size of the threshing floor is not reported but there was a turf surround and a sunken aspect, with four corn-dryers nearby (Morris 1979, 110). Several details are significant in the case of Hatcliffe Top and its putative threshing floor. Morris notes sites where hand threshing is likely to have been the practise, as probably at Hatcliffe Top. In Britain Morris (1979) and Lodwick (2017, 61) both note that drying the grain will have facilitated the threshing process. Morris records that threshing areas were not necessarily roofed, while screening was probably more about defining space and for ease of grain collection following threshing as air and wind movement will have assisted winnowing. It does not seem that the area of (4077) was roofed, while its location on the edge of the plateau at Corner Field may have helped with air movement and winnowing. In sum (4077) may well have served as a threshing floor, its attributes are consistent with features recorded at other sites adjacent to corn-dryers. It may lack the formal layout of examples at other sites but this may be typical of later fourth century examples at ‘workaday’ farms. By contrast, at Winterton villa, Stead as able to suggest Building B had an association of a threshing floor, corn-drying floor, and possible granary, while one of the site mosaics depicts Ceres (Stead 1976, 91).

Finally, malting may have been undertaken at Hatcliffe Top but if so that is not clear on the basis of the recovered samples of plant remains (Section 8.2) nor from other indicators. Malting ovens can be indicated through the presence of germinated grains but also ash/soot and fire cracked stones where the latter represent heated stones to lay on ears of wheat/barley in the malting process.

11.6.4 Marine Resources

The location of Hatcliffe Top facilitated access to creek, estuarine and coastal environments and resources. One available resource was oysters. Oyster valves survived well in the archaeological soils in Corner Field enabling a useful assemblage to be recovered for study. It is important to bear in mind that other foodstuffs, leaving no trace, will have been consumed in greater proportion and frequency. That is the nature of archaeological remains. The numbers of oyster valves recovered indicate their consumption was supplementary and is likely to have been periodic. Accordingly, their presence is more an indicator of cultural life and choices than as a core part of economy and diet. Their presence though is also important as it may be considered a 'tracer' for connections with the local coastal environment that are otherwise less visible. A small number of fish bones show that fish was consumed. It is not possible to accurately gauge how significant fish were in site diets as bones may not have survived. The wide environmental sampling and careful hand digging and trowel work in excavation *might* have resulted in greater numbers of fish bones were fish a regular dietary element. Some limited presence of fish bones was likewise recorded from the Roman site at Burringham Road, Scunthorpe (PRS 2009).

Returning to oysters, how they arrived at Hatcliffe Top is a matter for speculation. Given their size and the morphology of the shells it is likely that they were collected from the Humber estuary from natural beds (Section 8.6). The Hatcliffe assemblage comprises mainly young/small oysters possibly by preference, because demand was such that they were not left to grow bigger or because they were collected from a crowded or environmentally marginal location inhibiting growth. The nature of the assemblage suggests it was not sorted through such that larger specimens were selected out for marketing to others (Section 8.6). The oysters were larger at Nettleton/Rothwell, a Roman site earlier in date than Hatcliffe Top, (Somerville 2013), also too at Redcliff-North Ferriby (Somerville forthcoming) and they were also comparatively large at Hayton, East Yorkshire (Light 2015); therefore, since all four groups are likely to have been harvested from the Humber environs small size at Hatcliffe was not a function of the general environment. Turning to their gathering, collection may have been by the inhabitants of the site or maybe they were supplied by others; if the latter, was this to order or on a more ad hoc basis? On balance it is likely these oysters were harvested opportunistically, with their collection threaded

into other coastal activities that may have been more significant to the site inhabitants, such as livestock grazing and reed collection, and possibly salt production or wildfowling. It is conceivable the oysters were collected when there was another reason to go to the coast and thus they were a supplementary variation to diet. Yet in human society certain foods are linked to certain types of meals. Could oysters have been a required food? Were they consumed at specific ceremonies, such as calendar festivals, during religious observance and rites, and in status passage celebrations? The collection is likely to have been seasonal and could well have been linked to other season specific activities by the coast, with consumption embedded within annual cycles of production and cultural expression. This raises interesting possibilities with regard to human interaction with and conceptualization of 'the wild', at a time of highly regularized and streamlined farming (cf. Allen 2018, 101-18).

It is worth noting the extent of trade and distribution of oysters in Roman Britain. Winder had thought that the oysters recovered at the Late Roman signal station at Filey, North Yorkshire, (a site contemporary with Hatcliffe Top) must have come from the Kent, Essex, or Suffolk coasts or even the Firth of Forth (Winder 1992; Dobney *et al.* 1999, 30). When treated with care oysters can survive out of their marine environment for up to ten days. Monkton has reported upon consignments of oysters in Roman Leicester, in the heart of England, a long way from any coast (Monkton 1999). Groups of oyster valves have regularly been recovered from excavated sites in Roman York, though not always in large numbers, including the mid- to Late Roman well at Skeldergate and the Church Street Sewer (Berry and Spencer 1980; Rackham 1976), with measurement of samples from the General Accident site showing a range of sizes up to very large (O'Connor 1986). This led Dobney *et al.* (1999, 26) to deduce that their source or sources were neither over-fished nor systematically exploited. Marine organisms parasitical to oysters vary geographically and can be indicative of supply source (Section 8.6), with Monkton able to identify Essex as the likely source of oysters for at least two excavated sites in Roman Leicester (Monkton 1999, 341). The Humber estuary is a likely source of oysters in the Roman era (cf. O'Connor 1989), and it is probable that those at Hatcliffe Top are from this local source. Future work on the economics of oyster collection and trade, and their cultural role will doubtless reveal this to have been complex and varied.

The whale bone from Trench C comes from a rib,

towards the proximal end. It may have been collected from a coastal foray by a site inhabitant. As recovered it was conspicuously large and dense (for a bone), and cut marks across it at various angles attest to its use, as with other examples from sites of later prehistoric and Roman date, as a chopping board. Whether the bone was a foreshore 'flotsam and jetsam' chance find or came from a stranded whale or beached carcass, dismembered for its many useful elements, is impossible to establish; were other whale bones recovered from the site the latter may be considered a possibility. There may be more whale bones amongst the unexcavated archaeological deposits. Attempts to identify the species represented through scientific analysis via marine focused institutions were met with disinterest. The possibility for species identification remains; the outcome may be more significant than a mundane 'fact'. Opportunistic exploitation of 'random' cetacean beachings was a normal human activity in the past (cf. Gardiner 1997). It is very unlikely this bone relates to hunting. BBC News for Humberside reported on the 26 November 2015 the body of a whale washed ashore off Cleethorpes, revealed at low tide, which was thought to be a fin or minke whale 10m long. Data from the Cetacean Strandings index reported in *The Guardian* (22.11.2010) mapped 13 strandings of humpback whales around the coast of Britain in the period 2001-9, half on the east coast, with one by Hull in the Humber estuary (potential difference in variables in the Late Roman period though need to be borne in mind).

11.6.5 Coinage and Commerce

The fieldwork at Hatcliffe Top generated a sizable coin list for a Roman rural site. This was largely down to the great many hours of detecting undertaken as a key part of the research, supplemented by the coins recovered by excavators from the trenches. At other sites of the period less systematic detecting (or none at all) may have been undertaken, which may account for low numbers recovered. Each site will have had its own configuration of variables relating to coin presence, use and loss, with archaeological recovery regimes a second key determinant of the site coin lists available for study. Only one possible Roman coin was recovered from the site at Hobson Way, Stallingborough, on the Humber Bank, even though the site was thoroughly sampled (Field and McDaid 2011, 1 and 21). A total of 87 Roman coins were recovered from the extensively explored villa site at

Dalton Parlours, West Yorkshire, excavated in the later 1970s, where the coins all seem to have been recovered through excavation; these spanned the period c. AD 260-370 (Pirie and Mattingly 1990). Winterton villa, excavated in the 1960s and occupied through most of the Roman period, produced 105 coins (Stead 1976), though here again the recovery was by excavators, without use of metal detectors. Only four Roman coins were recovered from the more recent excavations at Burringham Road, Scunthorpe, which is noteworthy since the site investigated had several elements in common with the present site (Boyer *et al.* 2009, 58). Work at the Roadside Settlement at Navenby produced 80 Roman coins (Mann 2011, 104) while that at Nettleton/Rothwell produced three Iron Age and 104 Roman coins (Holman 2013), with metal detectors being employed at both sites.

What such assemblages mean in terms of coin use and site commerce is open to interpretation (cf. Section 11.4). Is the spread of coins in Corner Field, seen through the fourth century, simply a function of where people were, often and active, with coins about their person, or are the coins being spread by a different mechanism? Were coins being actively used in these locations, or is this 'passive' discard or unintentional loss? Are the period 21 coins more concentrated as they were more carefully curated and kept near to buildings and the home? It is possible that Corner Field was the site of periodic markets or fairs with acts of exchange at a natural crossroads, with some coins lost in the process. That does not seem too probable and the coins recovered are more likely chance losses, or discarded items, being very largely small coins of low intrinsic value (in other words both those coins prone to loss and those not so carefully curated by their owners (cf. Casey 1986, 69)). Some may have been discarded as the issues of a damned emperor, such as the issues of Allectus, as not prudent to be seen to possess or no longer legal currency, or simply seen as metal for re-smelting. One further point that may be significant is that this spread of fourth century coins across the western side of the field, south of the area of the trenches, was also the location from which the two fragments of a seal box were recovered (see Fig. 11.6). This is significant given Andrews' argument that they were commonly employed to secure money pouches (Andrews 2012; Section 7.5). The possible stylus from Trench B may also have been employed in commercial communications and record keeping. It might be expected that lead weights would be recovered from the archaeological investigations but none were forthcoming.



Fig. 11.16 An unusual case of a cattle horn core showing longitudinal sawing, suggesting the horn was pre-cut whilst still on the horn core (the sawing only cuts part-way into the core, not through it). From the Late Roman gully fill (1004), in feature [1009]/[1046] at Trench A.

11.6.6 Crafts and Industry

Evidence for crafts and industry is often meagre in the record for rural sites of the Roman era, something seen too at Hatcliffe Top. This is likely to be a function of the fact that such communities were small and whilst doubtless having a range of requisite tools these would be of a finite number; manufacturing may also have been undertaken 'off-site' and so may be less explored archaeologically. Tools were most likely to be, on the whole, made of iron and would hence be prone to corrosion and decay making them disintegrate or hard to identify when recovered archaeologically. Hoards and groups preserved through unusual circumstances, can, however, extend the picture. Only two smith's chisels, an axe head and a drill bit were, for example, recovered from the excavated area at Dalton Parlours, West Yorkshire, though a well produced further items (Scott 1990). Hatcliffe Top produced a stratified woodworking chisel blade and several knives, mainly fragmentary (Fig. 11.7). These items were iron and all from the trenches; no tools were recovered via the detecting. The six knives doubtless were employed for a variety of functions. Those three not from stratified Roman contexts might be later in date, possibly associated with the Anglo-Saxon presence but not necessarily.

Very little slag was recovered from the site although hammerscale and small prill fragments recovered from

the bulk soil samples show that smithing was taking place on site (cf. Section 8.1.3; Table 8.2). Presumably this was for the maintenance, adjustment and repair of tools and blades etc. as would be necessary at a work-a-day farm. Whilst the location/s of this activity were not caught within the trenches the greatest frequency of debris was recovered amongst soil from Trench A. It is possible that this was a use for the coal recovered at Hatcliffe Top, in other words as a fuel to induce temperatures via which iron could be manipulated. Excavations at the Roadside Settlement at Sapperton identified blacksmithing within one of the rooms of a strip building dating from the mid-third century; coal is also known from that site (Simmons 1985, 18).

Many collected, manufactured or processed agricultural and related items will have been organic or otherwise vulnerable to decay. This would include potentially items of wood, reed, basket work, cheese, hams, woollen clothing and salt. Moreover, there will doubtless have been some making and gathering of items and materials at rural sites that were then transported to central working locations, perhaps specialist activities at larger centres. Hence horn from animals slaughtered at Hatcliffe Top and other rural sites may have been collected for working elsewhere. Several horn cores were found during the excavations, from cattle and sheep. Figure 11.16 shows removal of horn was undertaken on site, in this instance, in an unusual case of longitudinal sawing; there is no obvious advantage or purpose to removal of the horn

in this manner. A small number of worked bone items were recovered, mainly crude adaptations for convenient immediate use, though not in all cases (RF10 from (1027)) Section 7.4; Section 8.5). Main products of the site must have included animals, evidently cattle and sheep and probably horses, which, following raising, will have left the site on the hoof, leaving thereby no direct trace of their former presence. Likewise cereal grain will doubtless have mainly left the site as whole grains rather than flour as the latter has a finite life and grain can be stored over a longer period. Hence no large numbers of hand powered rotary querns will have been required. The number recovered by the fieldwork was boosted by the collection from one secondary use of quern fragments from Trench D but the overall number points to domestic use. No millstones were recovered. An intriguing question is whether there were Roman watermills on the Waithe, perhaps at Waterdell, preceding the mill at that location of modern times (Section 2.3.4). This is possible and warrants further research. The proximity of the 'corn-dryers' in Corner Field to the mill location at Waterdell should be noted not only due to the presence of the modern mill but of the mill pond/s behind it and that at the exit of the Waithe from the Wolds at this point there remains, despite glacial and post-glacial shaping, a significant drop to the Marshland in the vicinity of the ancient sea cliff (Fig. 1.5). Water-powered milling would generate flour for a large body of consumers for use in the short term. It seems unlikely flour would have been produced for distant Lincoln, though maybe it was. A military garrison on or by the coast could have been a regular market (cf. below), with transport perhaps via the Waithe and tidal creek system. Returning to Corner Field, none of the querns has iron staining or iron residual so presumably they had not been utilized in preparation for smelting ore, a use seen elsewhere (at Acre House (Willis forthcoming a)).

11.6.7 Transport and Communication

Today Hatcliffe Top lies by the edge of the Marshland, 12.5km from the North Sea coast. In the Late Roman period it may have been more readily accessible by boat part of that distance. Conceivably this was by flat-bottomed vessels, along creek systems leading to the Waithe which are likely to have existed before the intensification of draining and reclamation of the Marshland in the Medieval and post-Medieval eras. This may have facilitated some export/import of resources, although that may have also included some overland movement to reach a point of suitable depth

of water and navigability. This possibility is speculative and it is more likely that road systems played the major role in transport and communication.

Several main Roman roads are known within the historic county of Lincolnshire (Bennet 2009, fig. 19; Albone 2016, fig. 9). Ancient and Roman track and roadways are not well-evidenced, nor understood, for the east of the county (Whitwell 1982, 69; Jones 1998a, 77; Albone 2016) and have been a matter of conjecture, based on what little indications there are, and recreational theorizing, on the presumption that a network infrastructure was necessary and existed. Better, grounded, knowledge is required. Two main arterial routes north-south seem certain to have been manifest in Roman times in the form of Caistor High Street on the western scarp-top of the Wolds, and Barton Street, running along the eastern side of the Wolds-edge. East-west routes are, however, considered first.

A Roman road heading north-east from Lincoln across the Clay Vale is traceable to Langworth, where it forks. The southern arm evidently links to a likely Roman road heading across the Wolds to the known Roman centre at Ulceby Cross where it turns towards a likely Roman centre at Burgh le Marsh or Skegness, with a Late Roman fort conventionally suggested hereabouts (Whitwell 1982, 68; Jones 1998a, 77-8, fig. 12; Albone 2016, 344). The northern arm of the road, on projection, looks to head, perhaps via the Roadside Settlement at Ludford towards Grainthorpe Haven south of the current exit into the North Sea of the waters of the Waithe (Phillips 1935, 113; Whitwell 2001, 15). Coastal change and silting complicate the seaward end of any projections and suggestions of destinations. Various proposals have been made regarding a second northern route across the Vale and the Wolds to the coast, starting from Owmbly on Ermine Street and proceeding via Osgodby and Claxby and on to the Wolds (Whitwell 1982, 66, 68), and thereafter projected, considering extant and ancient boundaries and topography, but to no certainty (Oliver 2006; West 2007). The dendritic, incised and sinuous nature of the Waithe system and that of other adjacent valleys through the Wolds would have posed challenges to the principles of Roman road building. Existing tracks following gentler inclines may accordingly have remained in favour during the Roman era. Certainly the western Wolds scarp slope will have been difficult to ascend or descend, especially with wheeled traffic, due to height and angle, together with instability and seeping water. On the Wolds gentler slopes and valley sides will nonetheless have needed surfacing, stabilization and maintenance, to off-set sliding and tumbles given that large areas would be within areas of

clay rich top soils and subsoil till, over the chalk, and because of erosion through water run-off. Accordingly, there were probably relatively few main roads and tracks over and across the Wolds until recent times. On the Marshland the present Waithe Lane and Station Road from Tetney, westwards may be a so-called 'salter's road' from/to the coast, as, like other routes ascribed to that category, it follows a fairly straight line towards the entrance to the Waithe valley; its antiquity is not known. A road from the Wolds to Cleethorpes, to a putative Late Roman fort, has been suggested (Oliver 2006; cf. Phillips 1935, 113).

Turning to the north-south routes, Caistor High Street today follows the watershed spine of the Wolds on its western side, essentially between the two Roman walled centres at Horncastle and Caistor. The prehistoric and Roman antiquity of this road can hardly be doubted and the Roman Roadside Settlement at Nettleton/Rothwell fronts on to it (Willis 2013; Albone 2016, 345-6). Jones' mapping of cropmarks designated as likely to be Roman settlements and productive foci showed these to be comparatively thick on the ground on the western side of the Wolds and its fringe (Jones 1988; 1989; 1998a). Caistor High Street would have been an important means of connecting these sites. Movement of materials produced along that edge will have been 'busy', including heavy items like building stone, tile and querns, with presumably structural timber, together with bulk products such as hay, straw, grain and to some degree coal being moved too.

On the eastern side of the Wolds lies Barton Street, long thought to be prehistoric and/or Roman in origin (e.g. Todd 1973, fig. 8; May 1976, 9, fig. 4; Albone 2016, 346), though there is no evidence for its actual date. It is highly likely there was a route of some kind approximating to the present course of Barton Street through ancient, medieval and post-medieval times. Presuming the present iteration of Barton Street is approximately in the location of past versions this lay just below the site discussed here and would have facilitated commerce and distribution. A trackway besides the Waithe itself is likely as it offered the opportunity of access along the valley in a broadly south-west to north-east orientation; this would have greatly assisted local movement of people, animals and resources and would mean the site at Hatcliffe Top was at the junction of this putative way and Barton Street. This sphere is an important area for future research, not least for assisting understanding of the ways resources moved, or could move, into and out of, through and along, the valley system of the Waithe, and, in particular, in this case into and out of the site at Hatcliffe Top.

11.6.8 Coal

11.6.8.1 The Presence of Coal in Stratified Deposits at Hatcliffe Top

Coal was found to be present in stratified contexts at all five main trenches at Hatcliffe Top (Table 11.14). Where present the coal was typically represented in contexts by small fragments, or by groups of miniscule fragments probably the result of the disaggregation of modest sized larger pieces, or as small fragments spread through a context. Pieces under c. 3mm were not counted amongst the hand-collected sample. Although it is widely thought that coal is a heavy substance the small pieces here, even when several centimetres long, are quite light, so despite the number of pieces the aggregate weight is a low figure.

Trench A yielded only one fragment identified in the course of the excavation, this being a comparatively large piece at 11 grams (45mm in longest dimension), found towards the end of the first season at the site, in a ditch fill context (1031), dating to the Late Roman period. Further traces came from environmental samples, from contexts (1047) and (1061) at A, being Late Roman linear feature fills, as well as from (1054), the earlier layer of likely later third century date. At Trench B coal came from four contexts all of Late Roman date. Trench C yielded the most coal, amounting to some 201 fragments weighing 148.4 grams from 25 contexts during excavation, and overall found to be present in 31 contexts when the evidence from the bulk soil samples is added. Coal was present in contexts through the sequence at this trench, having been recovered from a variety of feature types from across the extent of the trench. Amongst the largest pieces in terms of dimension were fragments from (3726) measuring 32.5 and 41mm in longest dimension, while a piece from (3701) was 14.5 x 7.5 x 6.5mm. The western end of the trench yielded the most examples. In the case of Trench D seven contexts yielded coal but this amounted to only twelve fragments (21.3 grams). Coal was present in the backfill/ground make-up in Stoke hole [4062] of (Trench D) Phase 2 (an event being late within Phase 2). However, the largest amounts came from Phase 3 deposits, accounting for c. 85% of the coal from this trench, including one piece from (4013) measuring 48mm in longest dimension (Table 11.14). The coal in the two fill contexts of the Phase 4 Ditch [4031] may well be residual and one piece at least could derive from adjacent context (4037) of Phase 3 since this had in part eroded into the ditch. Coal was also recovered at Trench E, being present within two samples collected for environmental analysis. The absence of coal from Trench F is explained by its small size, with only a short length of one feature revealed which may be pre-Roman (Section 11.3.2 MP1).

Table 11.14 Coal in stratified deposits at Hatcliffe Top, ordered by Trench, and within Trench by Phase. E. – Earlier; L. – Late; Lt. – Latest; NP – not phased but Roman era.

Context	Context Type	Number of frags	Weight (grams)	Description
Trench A				
(1054) A Phase 1a L. Roman	Layer	4	Present	From Environmental Sample Angular
(1061) A Phase 1 or 2a L. Roman	Lower fill of Ditch [1062]	20	Present	From Environmental Sample Angular
(1047) A Phase 2b L. Roman	A fill of Ditch [1048]	13	Present	From Environmental Sample Angular
(1031) A Phase 2c Lt. Roman	A fill of Ditch [1068]	1	11.0	Angular
Trench B				
(2029) B Phase 1	Fill of Gully [2030]	8	Present	From Environmental Sample Angular
(2017) B Phase 2	A fill of Ditch [2006]	6	Present	From Environmental Sample Angular
(2014) B L. Phase 2	Upper fill of Ditch [2006]	2	0.7	Angular
(2002) B Phase 3	Uppermost fill over Gullies [2009] and [2016]	2	0.5	Angular
Trench C				
(3036) E. Linear L. Roman	Fill of Ditch [3037]	1	0.7	Angular
(3004) L. Linear Lt. Roman	Main fill of Gully [3027]	1	0.4	Angular
(3041) C Phase 1	A fill of Oven/Flue [3050]	22	9.9	Angular
(3055) C Phase 1	A fill of Oven/Flue [3050]	6	Present	From Environmental Sample Angular
(3024) C Phase 2	Fill above Pits [3031] and [3033]	11	9.8	Angular
(3032) C Phase 2	Fill of Pit [3033]	2	7.6	Angular
(3502) C Phase 2	Part of Cobbled Path	1	2.4	Angular
(3740) C Phase 2	Part of Cobbled Path	14	8.1	Angular. All fragments seemingly from what were two larger pieces
(3754) C Phase 2	Lower fill of Pit [3755]	1	0.4	Angular
(3762) C Phase 2	Fill of Ditch [3763]	8	5.6	Angular
(3766) C Phase 2	Fill of Gully [3767]	1	0.1	Rounded
(3742) C Phase 2	A fill of Pit [3761]	53	Present	From Environmental Sample Angular
(3551) C Phase 3	Fill of Oven [3552]	46	Present	From Environmental Sample Angular
(3726) C Phase 3	Fill of Flue [3751]	23	26.3	Angular
(3710) C Phase 3	Upper fill of Flue [3739]	4	4.6	Angular
(3743) C Phase 3	Top fill of Flue [3745]	3	2.7	Angular
(3746) C Phase 3	Fill of Flue [3739]	2	Present	From Environmental Sample Angular

Table 11.14 Coal in stratified deposits at Hatcliffe Top, ordered by Trench, and within Trench by Phase. E. – Earlier; L. – Late; Lt. – Latest; NP – not phased but Roman era (continued).

Context	Context Type	Number of frags	Weight (grams)	Description
(3757) C Phase 3	Lower fill of Flue [3781]	15	Present	From Environmental Sample Angular
(3028) C Phase 3-4	Fill of Ditch [3029]	1	Present	From Environmental Sample Angular
(3506) C Phase 4	A lower fill of Ditch [3718]	1	4.2	Angular
(3506) C Phase 4	A lower fill of Ditch [3718]	36	Present	From Environmental Sample Angular
(3723) C Phase 4	A lower fill of Ditch [3718]	33	12.9	Angular. Some fragments come from one larger piece
(3707) C Phase 4	Main fill of Ditch [3718]	16	5.6	Angular, bar one sub-rounded. Some fragments come from one larger piece
(3709) C Phase 4	A fill of Ditch [3718]	27	15.9	Angular
(3770) C Phase 4	Fill of Ditch [3771]	10	8.1	Angular
(3535) C Phase 5	Fill of Furrow [3716]	2	0.3	Sub-Angular
(3701) C Phase 5	Fill of Furrow [3716]	1	0.9	Angular
(3713) C Phase 5	Fill of Furrow [3720]	15	14.2	Angular, apart from 2 fragments that are sub-angular
(3778) C Phase 5	Fill of Furrow [3720]	1	4.8	Angular
(3051) C NP Roman	Fill of Scoop [3052]	1	2.3	Angular
(3747) C NP Roman	Fill of Pit? [3748]	1	0.4	Angular
(3015) C NP L. Roman	Cleaning over (3016), (3023) and (3024)	1	0.2	Angular
Trench D				
(4019) D Phase 2	Backfill in Stoking Pit [4062]	2	2.9	Angular x 1 Sub-angular x 1
(4057) D Phase 2	Fill of Flue [4058]	3	Present	From Environmental Sample Angular
(4013) D Phase 3	Fill of Gully [4033]	3	13.0	Angular. From one larger piece
(4002) D Phase 3	Soot and ash rich Layer	12	Present	From Environmental Sample Sub-angular
(4017) D Phase 3	Soot and ash rich Layer	2	Present	From Environmental Sample Angular
(4026) D Phase 3	Fill of Stoke pit [4028]	1	Present	From Environmental Sample Angular
(4037) D Phase 3	Soot and ash rich Layer	2	4.2	Angular
(4076) D Phase 3	Lower fill of Flue [4086]	2	Present	From Environmental Sample Sub-angular
(4008) D Phase 4	A fill of Ditch [4031]	1	0.1	Flake
(4036) D Phase 4	A fill of Ditch [4031]	1	0.1	Angular
Trench E				
(5012) E Phase 1b	Lower fill of Ditch [5003]	5	Present	From Environmental Sample Sub-angular
(5007) E Phase 1b	Fill of Ditch [5003]	1	Present	From Environmental Sample Sub-angular

11.6.8.2 Discussion

Being recovered from 51 contexts coal had a significant presence at the site. It was found across the core area examined by the excavations and was seemingly available through the sequence of use of the site during the Roman era. That said the absolute amount from the hand collection is very small at 180.9 grams and 215 fragments, with coal identified as essentially traces in only a further 18 contexts from environmental bulk sampling (Table 11.14). Almost all of the fragments show angular faces and so were unlikely to represent glacially derived inclusions; nor had they been weathered and subject to abrasion.

Establishing the importance of coal to the site economy is not straightforward. Do these pieces represent background noise from perhaps occasional deliveries that were not at all vital for the occupation and activities at the site or does this wide occurrence indicate regular supply and a consistent use: a familiarity with and need for coal? Taphonomic aspects are certainly to be weighed when considering the position of coal within the economy of the site. The vast majority of coal arriving at sites will have been burnt leaving little or no archaeological trace. Often when coal is recovered it is likely to be small and very small pieces 'lost' at the time of site occupation or accidentally incorporated into other deposits such as midden waste. During the life of a site larger dropped or otherwise found pieces were presumably collected up for use; only small fragments are likely to be incorporated into archaeological deposits. The coal found at this and other sites excavated as part of the wider Central Wolds Project is prone to naturally disaggregate, breaking along planes, with some lamination and in particular dicing. This might explain the wide dispersal at the site. Small sizes resulting from a proclivity of coal to disintegrate are doubtless a hindrance to recovery by hand and eye. Small size could result in non-recognition, while soil coatings adhering to coal fragments can obscure the otherwise naturally lustrous black surfaces of this coal (a firm possibility given the tenacious natural clay component of site soils, and in the case of wet-sieved bulk samples where coarse residues typically end up with a dusty grey silt 'film' that can obscure characteristics). The average weight per piece found by hand recovery at Hatcliffe Top was only 0.84 of a gram, a figure suggesting that the odds on recognition are not strong. Another factor may be 'digger ignorance' due to the fact that coal is not often seen in Britain these days, so anyone born after c. 1985 will be less accustomed to the appearance of coal. The latter will include most of the students who have been

members of the excavation team; showing examples of coal and advising diggers to 'look out' for it are doubtless helpful tactics when coal is thought likely to occur on a site in cultural layers. This will also be a reminder to those who would recognize coal but who might overlook it as something worthy of collection during excavation. Perhaps much excavated coal went uncollected during the excavations at Hatcliffe Top (a 'known unknown'). The evidence from the bulk samples via wet-sieving indicates that coal was widespread in the archaeological soils but typically as very small fragments that might easily be missed by diggers.

Once at the site the coal will have been subject to movement through contemporary human activities, potential trampling, and other processes leading to its breakdown. The items recovered through excavation will be that fraction of the material that was not used, or evaded use. When burnt, further breakdown to ash and cinder/fuel ash slag will hide its former identity. As a fuel of comparatively high calorific value coal would have been a useful resource and perhaps a relatively expensive one. That may be an indicator of the economic status of the site and suggest that any unused coal remaining after activities, and indeed at the abandonment of the site, is likely to have been removed for later use/use elsewhere. At Hatcliffe Top no one or two contexts had any conspicuously larger amounts of coal, implying that within the areas excavated there had not been a store or cache of coal. Finds are not necessarily going to occur at points around sites where the coal was directly used, as seems to have been the case at Hayton, Burnby Lane, although in that case a use as fuel for smithing is deduced (Woodhouse 2015, 251-2).

Potentially the earliest evidence for coal at the site is the presence of fragments in context (1054) at A, likely to date to the later third century. Coal is present through the sequence at Trench C and is present at D from Phase 2 at that trench, associated with the backfilling of the earlier oven stoking pit. It is therefore likely that coal was present through the life of the site during the fourth century. It occurs in contexts that are associated with the ovens/corn-dryers directly, or in their backfill or otherwise lying close by. It is conceivable then that the coal was used as a fuel in some of these features perhaps for specific purposes. It may have been employed for smithing/manipulation of iron, for which there is some evidence from the bulk samples, but no excavated features can be assigned to such activity. Coal was in use at the site in its earlier, mid-Roman, phase, consistent with the presence of coal in the mid-Roman phase at the Brookenby site further up the Waithe valley (Willis forthcoming b).

Coal was also recovered at the Nettleton/Rothwell site associated with Roman period deposits. The coal from the latter site came from Trench J, an area that saw intense occupation through from the Late Iron Age into the later Roman period. The coal in this case was likewise recovered from a range of contexts. It was of a qualitatively similar nature to the coal from contexts at Hatcliffe Top. There are close parallels between these assemblages: in both cases the quantities per context are very modest, comprising small numbers of pieces of low aggregate weight but typically of fresh angular appearance and from a range of locations, and occurring through the sequence, but at this site (Nettleton/Rothwell) particularly associated with ditch and building floor contexts (cf. Willis 2013, 9.6.3, Ditch [9698] and Building 2). It was similarly noted in that report that the presence of coal in stratified layers could often have passed unrecognized by excavators who may not have been aware of its significance; in the case of coal, under-recovery is likely an endemic aspect of the archaeological process. Attempts to have the coal identified to source were unsuccessful, though this will be attempted again when the coal from Brookenby is studied during the writing up of that site in the near future (Willis forthcoming b).

11.6.8.3 Coal Supply and Use at Hatcliffe Top within a Broader Perspective

All four sites examined through excavation as elements of the Central Wolds Project have produced stratified examples of coal. As noted in the previous section stratified coal was found at the Roman sites at Nettleton/Rothwell, Brookenby and Hatcliffe Top. It was also stratified in a Roman layer at Otby Top (Willis 2013, 8.7.4; forthcoming a). In other words coal occurs at Roman sites located at the west, centre and east of the Wolds and can accordingly be considered a normal find at sites of this date on the Wolds.

In their extensive surveys of the evidence for the use of coal in Britain during the Roman era Dearne and Branigan and then Smith were confident in stating that the evidence of fairly widespread use of coal confirmed its deliberate collection and organized use from the later first century (Dearne and Branigan 1995; Smith 1997; Smith 2017, 234). Dearne and Branigan noted an expansion of use during the second century AD with the East Midlands being one area showing a smattering of sites where it was in use. At Derby, for instance, coal was present in second century contexts at Little Chester and at the Racecourse site, with supply continuing through to the fourth century (Sparey-Green 2002, 282-4).

On the other hand Dearne and Branigan had noted that evidence of coal extraction in Roman Britain is very limited with several sites once proposed as sources having been subsequently doubted (Dearne and Branigan 1995, 72-3). While extraction seems likely around the Forest of Dean (Jackson 2012, 192) and the south-west Midlands only one source away from the northern frontier of the province is noted by Dearne and Branigan as a possible place of extraction, namely Sutton-in-Ashfield, Nottinghamshire, where “poorly recorded coin finds” are known from an area by workable outcropping coal (1995, 73). Coal seams were exposed at the surface in the Rotherham-Maltby area of South Yorkshire (pers. comm. Paul Hildreth) and these may have been worked in the Roman period. Smith’s study indicated that there were various sources and likely sources of the coal used in the Roman period in the region from the Lower and Middle Coal Measures of Derbyshire, Nottinghamshire and Yorkshire (Smith 1997, 308-10, 318). Low grade coal is exposed in the coastal cliffs of north-east Yorkshire but the coal from the Roman deposits at Hatcliffe is of a better quality (pers. comm. Paul Hildreth) so this cannot be its source. Coal does occasionally occur as isolated erratic ‘grit’ grade fragments (clast) or as a component of grit laminae within glacial till and outwash gravels in northern and eastern Lincolnshire (e.g. Straw 2008, pl. 5; Berridge and Pattison 1994, 50) but its presence is highly infrequent as coal is not sufficiently robust to survive glacial movement and associated attrition; coal has not been observed by this writer in any glacial or post-glacial natural deposits on the Wolds or on its margins in 21 years of research and observation. Hence it is unlikely that glacially derived gravels/laminae are the source for the coal found at Hatcliffe Top or the other sites.

Considering specifically the east of England, several regional sites have produced coal from stratified Roman levels, whilst it was either absent from a series of other well-explored sites of the period in the region, or has gone unreported. In their survey Dearne and Branigan noted coal from the vicus at Castleford, West Yorkshire, in deposits dating to the early to mid-Flavian period (1995, 89), while coal was also present in early Roman contexts at Rossington Bridge, South Yorkshire, though not by the kilns and pottery production zone (1995, 95). In the second century the find-sites broaden with some sites in eastern England at greater distance from the central coalfields of England yielding examples, with Dearne and Branigan listing (amongst other sites) Rudston villa and Brough-on-Humber, East Yorkshire, and Lincoln, while the number of sites with evidence increases generally (Dearne and Branigan 1995, 76-7,

fig. 3). Significantly in terms of the site reported here, Dearne and Branigan identified a peak in use in the second half of the fourth century AD (1995, 76-7, fig. 3). They postulate that this may indicate that other potential sources of fuel - particularly wood - were less available for use as fuel, in some areas at least, perhaps due to sustained exploitation by comparatively large populations (1995, 86-7). It is unclear how denuded of trees the Lincolnshire Wolds were by the Late Roman period. Pollen sequences might be expected to shed light on this question but the available pollen data from Lincolnshire is very limited; Dark and Dark had no sample points from the area of the historic county in their four pollen sequence maps for Iron Age and Roman Britain (1998, 30-1). Their general conclusion from pollen data was that much of Britain was an agricultural landscape before the Roman conquest, with southern Britain extensively cleared of woodland in the Bronze Age (Dark and Dark 1998, 42). Evidence from excavation and survey has shown that the central Wolds was heavily used during later prehistory and the Roman era (Jones 1998a; Willis 2013) and in such zones Dark and Dark concluded that "pressure on land was greater, so that almost all available agricultural land was in use" (1998, 42). It was noted by Phillips' survey that the Waithe valley barrows at Hoe Hill and Ash Hill lay within a largely cleared landscape with some scrub during the Roman period (Phillips 1989a, 103 and 110). Leahy has suggested that by the Anglo-Saxon period little woodland survived in the area of Lindsey, that is, northern Lincolnshire (Leahy 2007, 19). By the time of the Domesday record woodland was seemingly scarce in Lincolnshire, with Oliver Rackham estimating that only 3.5% of the county was wooded in 1086, half the average for England with the county amongst the least wooded areas (Rackham 1976, 59-61; 1986, 78; 1994, 9) (though the returns may underrepresent woodland resources along water courses (Wastling 2009a)). Accordingly, Sawyer suggests, that manorial woodlands were carefully recorded as a significant asset (1998, 22). Drawing on the Domesday lists Oliver and Vince mapped these areas of woodland, emphasizing thereby the broad lack of woodlands on the Wolds and in northern Lincolnshire, something echoed by Leahy who notes a total lack of woodland at the northern end of the Lincolnshire Wolds (Leahy 2007, 19). At this time though there were some woodland areas on the Middle Marsh by Laceby Beck and the upper river Freshney and some smaller woods down the eastern edge of the Wolds immediately south of Hatcliffe Top (cf. Sawyer 1998, fig. 2.6) though these may be post-Roman regeneration, for which there is now pollen evidence (cf. Leahy 2007, 19 and 83). Whilst

evidence from the Medieval era provides no certainty as to tree presence some 700 years previously it shows that heavy human use of this landscape could mean woodland resources were under pressure for various uses including fuel and indeed state demands during Roman times. Leahy also points out the absence of any dendrochronological evidence for timbers felled in the fourth century in Lincolnshire, and, provisos excepted, that this could be a direct indicator of an absence of accessible large trees (Leahy 2007, 19); concerted reuse of timber in the Late Roman period is seen at other locations as at the fort at Oudenburg, near Ostend, during fort levels four and five (Vanhoutte *et al.* 2009). In such circumstances systematic extraction of coal and its movement over distance begins to be more readily understandable. An uncertainty lies around the land cover of the Middle and Outmarsh areas at this time; if there was desertion or partial abandonment of this landscape in the Late Roman period due to raiding from across the North Sea and a rise in sea level plus deteriorating climate (Field and McDaid 2011, 23-4) then some level of tree regeneration is likely and would be a potential resource, though mature trees may have remained few in number.

The gorge valley of the Waithe immediately to the north of Hatcliffe Top today includes much tree cover. James Rackham (pers. comm.) suggests that woodland for fuel would likely have existed on the steeper slopes of the Wolds valleys and on parts of the Marsh that were probably never cleared and would be unlikely to be over-exploited unless the population density was such to make strong demands of the resource. Population size and site density is far from known for the period in this region but even with settlements 500m to 1km apart there would probably have been sufficient woodland, in his assessment, for wood and charcoal fuel. It is, however, relevant to note the trend to extensive tree planting in this area in 1950s and 1960s (pers. comm. Roger Stephenson).

An alternative fuel may have been peat, if this could be accessed in areas of the Middle Marsh and Outmarsh. Peat has been identified in Roman era contexts at a number of sites in York, via lumps of peat, plant species or peatland insects, and it may have been in use as fuel (Dobney *et al.* 1999, 27). Dobney *et al.* speculate this may indicate a shortage of wood for fuel in the hinterland of York, or it may have been for animal bedding (1999, 28). At the Late Roman site at Hobson Way, Stallingborough, in the Outmarsh between Grimsby and Immingham, Field and McDaid report that "Charred rhizomes/tubers were common, suggesting the burning of turves, either as fuel or resulting from the purging of animal bedding or roofing material", although some mixed woodland

or woody margins nearby are suggested by charcoal from oak, ash and alder/hazel (2011, 21). The potential burning of turves or peat at the Burringham Road site was noted above (Section 11.6.3).

Returning to coal, the incidence of coal at Roman sites catalogued by Dearne and Branigan showed that this commodity was transported over distance (1995, 80). They concluded that the occurrence of coal across areas well beyond the coalfield sources “must imply ... sophisticated supply arrangements and in some cases these may reflect complex patterns of inter-regional trade, official supply arrangements and wider questions of fuel availability” (Dearne and Branigan 1995, 80). It is possible that the four sites in the central Wolds known to have used coal in the Roman era were supplied by differing means, especially as they received coal over several centuries. It may have come by road, or by river and road, from the central English coalfields, or by sea from the North East of England (Dearne and Branigan 1995, 86; cf. Allen and Fulford 1999; Halkon *et al.* 2015, 352). The latter possibility can be entertained as coal found at the Roadside Settlement at Hibaldstow, Rudston villa and at York has been identified as coming from the Yorkshire-Durham coalfield (Smith 1987, 191; Smith 1997, 308, table 2). Coal from North-East England may have been supplied by boat to the Humber region in exchange for agricultural or other goods sent north to the frontier zone (by sea). Waterborne transportation seems likely in the case of Hatcliffe Top and the other Wolds find-sites, for at least part of the journey, given the distance involved and the relative haulage costs if this were by road (cf. Dannell and Mees 2015; ORBIS: Stanford Geospatial Network Model of the Roman World). If the nearest possible sources were Sutton-in-Ashfield, Nottinghamshire or the Rotherham-Maltby area, South Yorkshire, the distances involved for supply to Hatcliffe Top would be c. 90 km (60 miles) and c. 75 km (50 miles) respectively as the crow flies. River transport via the tributaries of the Humber seems probable if indeed the coal was not from the North East of England. Re-distribution nodes are possible but would be speculative; candidates that may be forwarded in this respect would include Brough-on-Humber, Lincoln or Market Rasen. With regard to the latter, known mainly for its ceramic production, it is noteworthy that Swan found no evidence for coal being used in Roman pottery kilns (1984, 6-7). At Brough-on-Humber coal was recovered at many locations investigated by Wachter and is also well-attested at the Welton Road suburb; at both foci it was present through the second to fourth centuries (Wachter 1969, 69-70; cf. Dearne and Branigan 1995, 88).

Dearne and Branigan discuss the evidence for the use of coal in ferrous working noting sixty sites with a potential connection between coal use and iron metallurgy, with sites in eastern England including Brough-on-Humber, Cantley, Dalton Parlours and Lincoln producing evidence of coal within slags or iron working features certain or probable (1995, 83-4; 89; Biek and Wachter 1969; Ottaway 2013, 260). At Great Limber on the Wolds coal was found in Late Roman deposits associated with likely smithing slag (Taylor 2010). Supply to fuel iron smelting along the western foot of the Wolds may have been a driver of supply to the general area especially perhaps if the state had an interest in that industry and/or the alternative fuel (wood/charcoal) was in short supply or less preferred. Though an association with metalworking and everyday blacksmithing is prominent, coal is a flexible fuel and may have been employed in a variety of domestic, craft and industrial processes. Dearne and Branigan list instances of its probable use in other activities like food preparation via baking/cooking ovens (1995, 82; 85). These authors noted coal in apparent use as a fuel associated with grain drying/malting ovens at Vineyards Farm, Gloucestershire, perhaps at Barton Court Farm, Oxfordshire, Huntsham, Hertfordshire, associated with what may have been a drying oven at Norton, North Yorkshire, and associated with a heated shed, possibly for corn-drying, at Wyboston, Bedfordshire (1995, 83). Given a range of deposits at Trench C at Hatcliffe Top produced examples of coal an association with the likely drying ovens should be considered. Coal was found in the construction matrix for a Late Roman drying oven at Brookenby in 2015, which itself cut an earlier dryer. The presence of a fragment of galena in Ditch [3718] at Trench C (L123, Section 7.12) is also cause for interest as Dearne and Branigan note the possible use of coal in lead ore processing at Flint, Pentre, and in lead smelting at Coastal Tower 26a at Rise Howe, Cumbria, though that may be Medieval activity (1995, 83). Further, lead has been found in hearths fuelled by coal, indicating working of lead, as at Huckhoe, Northumberland, while coal may have been used as a fuel by workers in pewter at Camerton, Somerset, (1995, 83).

In Lincolnshire, coal has been found at Hibaldstow, associated with Building IV and of Antonine to mid-fourth century date, potentially related to corn-drying (Smith 1987, 190-1; Dearne and Branigan 1995, 92), Lincoln, from at least nine sites, in contexts of Antonine to late fourth century date (Dearne and Branigan 1995, 93), Sapperton, in various sealed contexts of second to third century

date (Simmons 1985, 18; Dearne and Branigan 1995, 95), Great Limber (cf. above) and at Winterton villa, in Antonine to fourth century contexts in areas away from the villa complex (Dearne and Branigan 1995, 97); coal is not referred to in the 1976 report on the villa (Stead 1976). There are no reports of coal from the following Lincolnshire sites: Burringham Road, Scunthorpe (Boyer *et al.* 2009), Dragonby (May 1996), Hobson Way, Stallingborough (some fragments were recovered but thought natural, so discarded; contextual details not given (Vince and Field 2011)) and Navenby, Chapel Heath (Palmer-Brown and Rylatt 2011).

In conclusion, coal is present in very small amounts across the site, occurring in a high proportion of contexts, ranging through the occupation periods of the later Roman period. Taphonomic factors account for its character as recovered. On balance it seems unlikely it was used as a fuel for the ovens and dryers as they are not likely to have needed high temperatures; nonetheless it may have been employed and the evidence is equivocal at this site. Charcoal would have served similar purposes to coal and was more likely readily made from local coppice wood, etc. Working of metal is a potential use (in an unexcavated part of the site). As a supplementary heating and transformative power source it was doubtless valued. Whilst we might be inclined to see Hatcliffe Top as falling into Dearne and Branigan's category of a site with coal finds that did not have the economic power itself to attract coal supplies (1995, 81), it seems there was sufficient coal around in the area for it to have been consistently available for some time to fuel activities at Hatcliffe Top – or Hatcliffe or its own products had the requisite pull or enabled the acquisition of coal. The evident ready availability of coal at these Wolds sites, such that its presence in site contexts is commonplace, suggests that our understanding of the networks of supply of coal to sites in eastern England and perhaps elsewhere needs deeper consideration.

11.6.9 Who Owned the Land?

Evidence and perspectives outlined below in Section 11.8 point to robust economic and administrative geographies still in place through the fourth century. Within this system the site at Hatcliffe Top will have played its part. This may have been via a role as a local centre for grain processing and as a livestock-handling node; or, the site may just have been farming and processing resources raised on its own land-holding. A key question is who

owned the land that this community farmed? Was it themselves or did the local elite (visible through the villas at Brookenby and Kirmond le Mire further up the valley (Section 2.2.2.2)) own the land in the fourth century? If the elite held the land in earlier periods did they still own it through the later fourth century, bearing in mind the evidence for a wider settlement reorganization in the first half of the fourth century (Section 11.8)? Was this now state owned land, perhaps explaining the changes at the villa complex at Brookenby where the major aisled building of the mid-Roman era is demolished by the early fourth century? Might the Waithe have been a property boundary with another farm in Field 1-2-3 just 550m to the north-west, on the other side of the Waithe gorge (Chapter 9)? Perhaps the community owned the livestock but were tenants on the land; the arrangements may have been complicated.

11.7 Cultural Life and Expression

11.7.1 Artefact Recovery

The finds recovered from Corner Field provide a window on the people who created, lived and worked at the site in the Late Roman era. This portal, in truth, is fragmentary and can provide only a glimpse at parts of what will have been a wider and complex set of forms and expressions. Taphonomic processes of course lead to selection in the material that survives for archaeological study; sampling processes may also favour certain finds types. From this site the pottery remains and metal finds provide a variety of information.

A significant consideration when evaluating finds assemblages is the effect metal-detecting has upon recovery. When used on sites detecting often boosts the tallies of metal items very significantly, from both excavated areas and in associated surveys (Eastaugh *et al.* 2006, 87-8, fig. 5.11). This can mean that finds assemblages reported archaeologically strongly over-represent metal finds in some categories, as with bracelets, bangles and hair pins where non-metal types existed, as commonly, if not more so, than metal types. For instance it is likely that in the Roman period bone hair pins were more common than metal versions, which were perhaps of greater value, yet the detecting of ploughsoils is not going to result in the recovery of hair pins of bone, nor of, ivory, jet, glass or shale. There is of course a common bias within detected assemblages in favour of non-ferrous as opposed to ferrous items (e.g. Millett 2015, 514). Biases in the ascription of

archaeological value and intrinsic value to certain items is also at play in so far as coins and jewellery are often specifically targeted meaning that iron artefacts that may have been essential functional items at past sites are rarely recovered, such as (parts of) saws, sickles and hammers. (At the Nettleton/Rothwell site systematic sampling for iron artefacts in the ploughsoil was undertaken, tied into the fieldwalking grid in Street Furlongs (Appendix below)).

11.7.2 Personal Adornment

The fieldwork resulted in the recovery and recording of several examples of brooches, finger rings and bracelets, of Roman date, from Corner Field, together with metal hairpins of Roman or Anglo-Saxon date. It is probable that these were 'everyday' items of the people who lived and worked at the site: personal, familiar and likely to have been, to some degree, imbued with affective associations. Amongst the Roman finds there is some chronological range. On the whole the majority (which could include the hair pins) are consistent with the Late Roman emphasis of the site activity. Where earlier types are evident, as in the case of the two Trumpet type brooches (cf. Section 11.4), they could still have been in use in the mid-third century, to which the earliest features excavated can be ascribed. In fact these brooches will have been contemporary with the samian ware at the site which is second century (cf. Chapter 4) and which, likewise, could still have been in use in the mid-third century.

None of the five Roman brooches from the fieldwork reported here are remarkable from a typological viewpoint (cf. Section 7.1.2) but the presence of two Crossbow brooches at this location is noteworthy, as is the report of a gilded plate brooch. The Crossbow brooches are represented by the bead/knob from the type, recovered during the survey in Corner Field (Item 33 RF 2030) and a detected find from the field on the opposite side of the A18 near the road (PAS item NLM-67EF4E) which is largely complete and found so near to the Corner Field complex it is very likely to be associated (Section 3.6.4). The two brooches are consistent with the fourth century activity at the site. This heavy brooch type has long been thought to be associated with the Roman military and those in the service of the state, worn as a symbol of status and rank and so for there to be two from the site is suggestive. However, they are not uncommon. Their use by the wider civil population cannot be ruled out, which is significant as there are no indicators of military presence at Hatcliffe Top. Several examples of the type occur in the general area. As reported above a

bead/knob with fragmentary arm is documented from Round Hill, Hatcliffe (Section 10.1.2, PAS NLM5738). At Swinhope, further up the Waithe valley, a Crossbow variant, perhaps Roman though possibly dating to the immediate post-Roman period, is documented (NLM-47F3B0). Further afield, a part of a Crossbow brooch is recorded from near Kelstern on the Wolds (NLM-E41A21), while further north the Late Roman site at Deepdale, near Barrow on Humber produced a Crossbow brooch dated c. AD 350-410 (Atkins *et al.* 1981, 18; see Fig. 11.17). Another late brooch, but in this case a copper alloy Umbo or Tutulus plate type with equidistant lugs around its circumference, comes from detecting of ploughsoil in Ashby cum Fenby parish on the south bank of the Waithe c. 3.5km south-east from Hatcliffe Top; it is recorded on the PAS (NLM-030BB5). Returning to Hatcliffe Top, a gilded copper alloy oval plate brooch was reported from Corner Field in 2016 (LIN-81BCF5). Later Roman in date, it would have held a glass setting (Fig. 11.18).

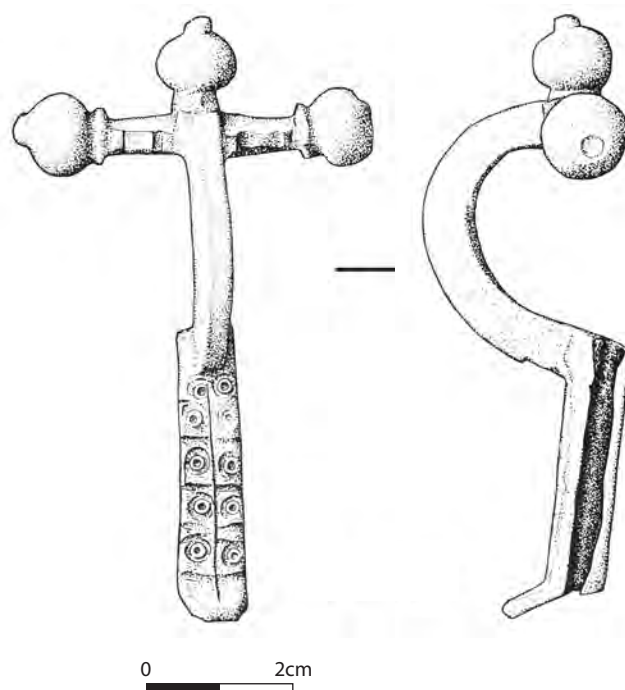


Fig. 11.17 The copper alloy Crossbow brooch from Deepdale, near Barrow on Humber (after Atkins *et al.* 1981, 18). This item has been recently re-dated to c. AD 350-410 by van Thienen who states that this is best categorized as belonging to Keller-Pröttel-Swift Type 3/4b following Keller (1971), Pröttel (1988) and Swift (2000), this being a subtype of the general 3/4 type (Van Thienen 2017). The circle and dot motif is very common on brooches of this type. Exact parallels are very rare, due to the individual finishing of each brooch but this example is quite normal given the variations and individuality seen in the craft production of these Late Roman brooches (pers. comm. Vince van Thienen).

This find, from metal detecting, is recorded from the approximate centre of the western side of the field and is consistent with other detected material from the Project. In a contemporary context, in original condition, it would have been eye-catching (Fig. 11.18).

Several aspects relating to the metal jewellery from Corner Field may be noted. The sample is not large, mostly comes from the topsoil/ploughsoil and is fragmentary. Hence it is impossible to know whether these items were once more or less whole and 'lost' on site or represent discarded broken items combined with 'rubbish' and removed for middening, or whether they were already chopped up as 'scrap' for recycling in the Roman or Anglo-Saxon period, possibly even brought to the site as scrap, from elsewhere, and whatever explanation subsequently incorporated through ploughing into modern layers. On balance it is likely the items were the (highly) personal possessions of the people living and working at the ancient site.

Bracelets, especially metal bracelets, became popular in the Late Roman era (Cool 2000, 33; 2012, 138; Vanhoutte 2018, fig. 114) and so it is not surprising that several are represented amongst the finds from Corner Field, all typologically of Late Roman date. Their diameters suggest they were worn by adults. Bracelets are occasional but not especially frequent finds from the broader area, judging from the PAS database; there is one, for instance, from a surface record of finds east of Brigsley just to the north of the Waithe (this being represented by a fragment

of cast band with barley sugar twist, thought to be from a bracelet of mid- to Late Roman date (NLM-D45DD3)).

A question that arises is who wore these jewellery items? Were there gender dimensions to the wearing of jewellery, with say bracelets in the Late Roman period being associated with women, as presumably were the metal pins conventionally identified as hair pins on the basis of grave finds and so forth (Crummy and Crossan 1993, 135-6, table 2.48; cf. Stratton and Worrall 2015). Indeed hair pins are customarily associated with female hair styling in the commentaries, being both functional and decorative, and evidently used by both women and girls (Allison 2013, 77; Cool 1990b, 150; Vanhoutte 2018, 294; Vanhoutte and Verbrugge 2017). Whilst the four metal hair pins from Corner Field are unstratified they are short and thereby consistent with the simpler hair fashions of the later Roman era (Allason-Jones 2005, 133). Turning to bracelets there is some debate as to the degree to which they should be seen as indicative of women as men occasionally wore bracelets and armlets in the later Roman period (Allason-Jones 2005; 2010). Swift concluded that, based on identification of burials, bracelets were normally worn by females (2000, 37 and pers. comm.).

There are some types of Late Roman rings that are worn only by males, for instance, those inscribed 'FIDEM CONSTANTINO' connected to Imperial service (pers. comm. Ellen Swift). Measurement shows some Late Roman rings, such as those with Chi Rho symbols, to be of broader (*ergo* masculine?) diameter sizes (in the range 19mm and above). However, as both of these aforementioned types were arguably military, it should not be concluded that Late Roman rings were generally worn more often by males. Measurements based on the inner diameter of Roman rings show a range of sizes; Furger (1990) believed the smaller were likely to be worn by women. In fact finger rings were worn by men and women in the Roman world, and on all fingers and joints, meaning caution is necessary in ascribing a ring as belonging to a male or female. Unfortunately the rings from Corner Field are fragmentary making diameters impossible to accurately measure. More unequivocally the gold ring (Item 18) attests to the presence of someone with the wealth or position to attain this ornate valuable piece, paralleled in the Thetford Treasure. That this Late Roman ring will have had three settings may be significant, for three was often held to be 'powerful', as in the Christian holy trinity, but this understanding is not limited to Christianity.

Several items of jewellery from Corner Field are fashioned in a snake design (Chapter 7). This is a well-known style with a number of examples of



Fig. 11.18 A Late Roman gilded copper alloy plate brooch, which would have held a glass setting. From Corner Field; found by metal detecting in 2016 (PAS item LIN-81BCF5) (Length: 38mm; at x2 here).

Roman rings and bracelets of snake form recorded from Lincolnshire (wordpress blog 'romanlincolnshire' by Antony Lee 6.9.2017). Late Roman snakes-head bracelets are especially well-attested in the Danubian provinces (Swift 2000) and were manufactured, for instance, at the fort at Oudenburg, near Ostend (Vanhoutte 2018). Snakes in the Greco-Roman world were associated with healing, renewal, rebirth and the underworld, and so snake imagery evoked well-being and the supernatural (Johns 1996, 37-8; Cool 2000). Snake and snake-head bracelets are relatively uncommon at British sites. Examples of snake design at Hatcliffe Top are typically rather stylised and by this time (the fourth century) were probably simply a 'fashion'. Accordingly, the interpretation that Cool developed for an association of snake jewellery with cultic activity, in the case of more naturalistic items of an earlier date (Cool 2000), may not apply here (though Vanhoutte (2018) points up suggestive evidence in the case of Oudenburg).

11.7.3 Pottery Consumption

The pottery assemblage from Hatcliffe Top has a strong Late Roman character with types from relatively local production and from the wider region present. The composition finds parallels with assemblages and groups from elsewhere in north-east Lincolnshire but has to some degree its own distinctiveness. There are similarities of composition, for instance, with the large collection from excavations at Glebe Farm, Barton-upon-Humber with its Late Roman emphasis, known from grey literature (Didsbury nd; Steedman 1993a) with types recovered during excavations in advance of the Covenham to Boston pipeline (Lyons forthcoming) and the group collected by David Everett at Thoresway on the Wolds (Whitwell and Wilson 1969, fig. 3; Section 2.3.2 above). Comparison with the ceramics from the site at Hobson Way, Stallingborough, on the Humber Bank suggests status differences as the Hobson Way assemblage included very few finewares or specialist pottery items, perhaps indicative in this case of a rural site of low status (Field and McDaid 2011, 21).

The assemblage from Corner Field is largely utilitarian though with some representation of colour coated beakers in the Nene Valley tradition and painted and other wares from Swanpool (Darling 1977) and even Crambeck. Finewares from Market Rasen occur. The samian ware sherds at the site at first may appear anomalous given that this material dates to the period before the known development at Corner Field; it hints at activity there prior to that caught in

the stratification revealed in the explored trenches, but equally could represent curated items surviving because they were prized, well beyond a normal ceramic life-time (Chapter 6). Local clays and minerals are similar across eastern Lincolnshire meaning that the ascription of some vessels to a particular point-source is (currently) not possible. Indeed potters were imitating their neighbours and so pots from sources across a district can look identical, hence several coarse ware fabrics are generic (Chapter 6). The pottery industries along the western foot of the Wolds between Market Rasen and Nettleton/Caistor and in north Lincolnshire are somewhat explored but need more publication of excavated material and further field exploration. The prospect of production on the eastern side of the Wolds also exists.

Did consumers at Hatcliffe Top get the pots they wanted and needed? Was there scarcity in supply? What pots did they want? What were large liquid quantities stored in? What were presumed commodities such as milk, yoghurt, alcohol, salt and butter stored in? Was that within ceramic containers, and if so which types? Lipid analysis may inform us in the future.

11.7.4 Pass-times and Recreation

No direct evidence for recreational pursuits was forthcoming. It is possible that the seal box (Section 7.5) was used to secure private correspondence rather than to seal a document relating to commerce or law, or indeed a purse (Section 11.6.5).

11.7.5 Religion, Belief and Burial

As noted above it is possible the snake imagery of some items of jewellery from Corner Field was fashioned and selected for reasons of belief. Equally, the occurrence of six fragments from six different quern stones at the threshold of the flue on the edge of stoking pit [4062] is suggestive of selected placement. Black noted the frequency of quern fragments reused in corn-dryer structures in the south-east of England, although he did not comment upon any symbolic or ritual/religious connotations (Black 1987, 132). This is consistent with evidence elsewhere for pieces of broken querns used at thresholds and in the construction or termination of ovens and features associated with transformation, echoing themes of liminality. Querns are themselves objects for transformation, of seeds to human food (Willis 1999, 99). This may simply be symbolic, and traditional, but belief and superstition were probably

embedded within much practice at this time (Fulford 2001). These cases apart there is no evidence of religion or belief amongst the gathered evidence. The lead tablet from nearby Round Hill (Chapter 10) may well be of contemporary date with Hatcliffe Top and suggests the possibility of evoking the gods via incantation, perhaps with a shrine or temple in the vicinity.

No burials of Roman date are recorded in the area and the work of the Central Wolds Project has encountered none in 21 years of research (not that their specific detection has been an aim). The survey and excavations at Hatcliffe Top revealed no burials. The neonatal cranium fragments from the post pit [3025] at Trench C are the one exception. They evidently represent a burial disturbed by the pit digging activity in the Roman period or had already been disturbed prior to those events (Chapter 4). Burials of still-births and new born young within occupation areas are well-attested at rural sites across Roman Britain (Millett and Gowland 2015).

11.7.6 Building Materials and Buildings

The excavations did not locate any buildings and nor did the geophysical survey isolate any candidates. The likelihood is that there were buildings at the site, within some of the enclosures and that these were constructed in timber, with structural posts set in post-holes, or on sill-beams or placed on pad-stones. Structures of this type can be challenging to detection by archaeological means. The later Roman period sees a general shift back to vernacular building styles with stone and tile losing the prominence seen in the mid-Roman era, especially in the countryside. The widespread iron nails recovered could be background indicators of the presence of buildings but some may alternatively relate to other types of organizing and workaday structures. There is no stone suitable for building in the area of Hatcliffe Top, with the tabular flint being too brittle, the local chalk too soft and field stones, of erratic origin, being especially hard, sub-rounded and rarely of much size. The fabric of the later churches in the area is drawn from the stone types outcropping on the western escarpment of the Wolds some 13km or more west of Hatcliffe Top. This source was quarried in the Roman era as Roach, Tealby Limestone and Claxby Ironstone occur in the walls of Late Roman Caistor, in buildings at Mount Pleasant and Brookenby excavated as part of this project (e.g. Fig. 2.3) and as surface clusters at fieldwalked sites such as that at Churn Water Heads above the western escarpment. The chronology of this stone extraction is not well understood and if the walls at Caistor are not especially late then it is possible stone

extraction was in decline or had largely ceased by the mid- to late fourth century when the site at Hatcliffe Top had its heyday. Equally tile manufacture may well have been uncommon by this time (cf. Section 7.9). In other words the site may post-date the availability of these hard building materials seen in use earlier and further up the valley. However, these materials will always have been costly and perhaps not affordable to the community working at Hatcliffe Top, especially when transport costs for conveying the stone over 13km to the east side of the Wolds are factored. No building stone, and hardly any tile, was present in the ploughsoil at the apparent occupation site of Roman date at Beelsby Field 1-2-3 to the north (Chapter 9). The one instance of structural stone in use at Hatcliffe Top is that of the oven/dryer flue [4086] which dates to the end of the fourth century (Chapter 4). This was found to contain lengths of Claxby Ironstone, evidently to support the floor of the structure and/or bridge the flue. The blocks were highly suitable to this purpose so might have been made (commissioned) for this use, or been attained from a disused building directly or indirectly. There was absolutely no Roach, Ironstone, Limestone or Sandstone present in the field ploughsoil either, being further strong evidence there were no buildings with a stone element hereabouts. All things considered it is highly likely that buildings at Hatcliffe Top will not have included stone or tile. They are likely to have had timber (oak) frames with woven wood and clay or clay brick infill and roofs of reed, straw or wooden tiles or shingles, possibly also employing timber nails, pegs and twine bindings. Both the Marsh and the course of the Waithe through the Marsh, and even at places along its route through the Wolds, could have been a source of reeds for thatching. There is one fragment of Roman window glass from the excavations (Section 7.13), perhaps representing glass brought to the site for re-working rather than indicating glass windowed buildings.

Considerable infrastructure, investment and organization is likewise needed in clay brick and tile production. As noted above (Section 7.9) the small amount of tile and brick from Hatcliffe Top seems highly likely to represent salvaged/recycled material from another site. Roman clay tiles are very heavy and a roof tiled in this manner will have been costly in terms of the tiles themselves, the labour to construct the roof and the means to secure the tiles, and in the extra strength in terms of wood needed to support the weight compared to thatch or shingle roofing.

Whilst the absence of building stone and tile could have been through lack of such options or for reasons of economy, it must be wondered whether these materials were not used for reasons of cultural preference. Yet in

weighing that possibility time and location must bear heavily in the equation. Around the turn of our present millennium it would have been fashionable to interpret this absence of Roman constructional materials as a rejection of potent symbols of ‘Romanness’, but located a long way from such sources, at a time of change, and with different building options available, building in organics and unfired clay may have been a highly convenient practical choice. This would be consistent with the general picture seen elsewhere for Late Roman agricultural settlements.

There are few sites published from the area so comparable information is limited. Little tile was recovered from the Late Roman site at Hobson Way, Stallingborough, which produced just 36 fragments of Roman tile and 23 fragments of Roman brick. Here it was assumed “construction was probably of mud and wattles with thatched roofs” (Field and McDaid 2011, 20). A range of tile fabrics was represented and attributed to multiple sources and some likely hypocaust tile occurred. Many fragments of this CBM are reported as having been subjected to intense post-firing heat, whilst others have soot residues (Field and McDaid 2011, 20), so they were probably employed in hearth construction or perhaps were associated with the likely drying ovens at the site (cf. above). The site at Burringham Road, Scunthorpe, thought to be on the edge of an occupation site, possibly a villa, produced 140 fragments of tile at just under 10kg (about double the weight of the tile fragments from Corner Field); here though a wider area was opened and the site has an earlier emphasis (Darling 2009, 44, Table 3). Equally, little tile was present at the Roman Roadside Settlement at Navenby on Ermine Street south of Lincoln, amounting to 124 fragments, not all of which were Roman (Young 2011). Stone roof slates are reported from the Roadside Settlement at Hibaldstow on Ermine Street north of Lincoln, but details of these and the frequency of tiles have never been published (Smith 1987). As noted above (Section 7.9) there was little tile from the Roadside Settlement site at Mount Pleasant, despite extensive fieldwalking and excavation.

11.7.7 Water Procurement

No wells or water holes were located during the excavations nor were any readily apparent from the geophysical survey. The site lies at approximately 20m above the Waithe and so access to water will have been a significant consideration for the people of the site. The watering of animals and livestock will have been a continuing requirement. The equivalent of dew ponds are entirely possible as the immediate subsoil

is formed by the glacial cover clay which essentially carpets the plateau area on the western side of Corner Field, extending to the south and west. It may be that the sub-round anomalies numbered 10 and 11, detected by the magnetometry, are water pits for cattle (Figs 3.12 and 3.13) but chalk quarrying seems a more likely explanation; the sub-square anomaly 12 is another outside possibility. Iron Age settlements, and to a lesser extent Roman sites, seemingly have less water features than one might expect.

11.8 The Late Roman Context of the Site at Hatcliffe Top

One striking aspect of the coin list from Hatcliffe Top is the sudden rise in coin loss around AD 330. This mirrors the strong indications from the pottery, as well as the density and sequence of the excavated features, that the main floruit of site activity is through the fourth century. Conversely, as Holman points out (Section 7.14.2), the site at Mount Pleasant effectively ceases at that time (c. AD 330), certainly in terms of coin loss. Could these be connected changes related to landscape reorganization across the Wolds and beyond? Was this through state intervention or as a result of shifts in land holding or changes in economy and practice (that might themselves be related to state policy)? Change in the Romano-British countryside is seen elsewhere at this time, not least in the Midlands. The fourth century saw a decline in the number of rural settlements, as in the Severn and Avon valleys, with centralisation of estates a suggested explanation (Smith 2016, 207). A marked decline in the number of aisled buildings seen at this time might then be explained by more centralized provision for workers, storage and processing (Smith 2016, 67). In the Waithe valley the aisled building at Brookenby is demolished around the turn of the fourth century (but occupation there continues (Willis forthcoming b)), while this theory may explain the potential absence of any aisled buildings at Hatcliffe Top; that is to say, they had passed out of fashion by the time of its ‘take-off’.

At this time Lincoln was likely to have been one of the provincial capitals of Roman Britain, *Flavia Caesariensis* (Mattingly 2006, 228, fig. 9). Judging from the evidence of the mid- and later fourth century faunal and insect assemblages from Lincoln, and indeed York, Dobney and his colleagues believed these centres remained vigorous economic entities, apparently with sizable populations benefiting from systems of social organization till the end of the century, despite wider processes of change (Dobney

et al. 1996; 1999, 30). This is contrary to the frequent view of late Roman urban decline, but is in line with Faulkner's thesis (Faulkner 1994). On the basis of buildings evidence at Colchester Faulkner believed that following a collapse in civic life happening c. AD 325, a reformation occurred with a sustained sizable population and a central role. Reece, in analysing the coins from a series of excavations and collections at Lincoln found the city to be above the mean for Romano-British towns in terms of coin loss through most of the fourth century but with a marked drop from AD 378 and a further drop for coin loss, below the mean, for AD 388-402 (Reece 1983, 64-70, fig. 68). As at York the character of Lincoln in the later fourth century is, as yet, not clear, with Jones concluding that the town continued to at least the end of the period of official Roman rule but in a reduced state (Jones 2003, 133-6; cf. Steane *et al.* 2006, 272 and 286). Ottaway sketches Late Roman York in a similar manner: as a diminished and disinvested place (2013, 301-2). Yet at Lincoln the Late Roman evidence from St Paul in the Bail, plus the archaeobiological data, show that Lincoln remained a significant central place through the fourth century and that there was 'life in the town' though not 'town life' as it would have been configured and experienced during the earlier Roman era (cf. Reece 1980).

The position of the state in these developments is unclear. O'Connor posited that the scale of supply and consumption to urban and other places at this time indicated an ongoing centralised money-based economy rather than a command economy (O'Connor 1988). Whether or not coin finds can be seen as indicators of an extant market economy, soldiers pay and/or something else by the end of the fourth century may be debated but what is clear is that they were still in supply and circulation in Lincolnshire through Reece's period 21, AD 388-402. Their distribution to some extent highlights sites still in use and having some relationship to coinage at this time, as at Hatcliffe Top. This is not the place to aim to list all examples, and so some instances illustrate the distribution across the historic county. In the south of the county, Sapperton has produced coins of Theodosius I and Honorius (Marjoram 1976, 10; Simmons 1988), and from Navenby have come similarly late coins (Mann 2011, 104, table 4.4). Hibaldstow, north of Lincoln also has Theodosian issues (Smith 1987, 189). Coins of Honorius are known from Owmbly-by-Spital also on Ermine Street (Smith 1987, 189) as well as Caistor (Phillips 1935, 131). From Deepdale a silver solidus of Arcadius (c. AD 383-408) is recorded and a hoard of silver siliquae dated c. AD 395 has also been found (Atkins *et al.* 1981, 7; see Whitwell 1982, 26, 160 for

other instances). Numbers of coins of this period are known from Lincoln but comparatively, the presence is not strong (Reece 1983, 64-70, table 4, cf. above). However, rapid change away from systems familiar under Roman rule seems to have occurred around the turn of the fifth century (e.g. Dobney *et al.* 1998).

Some wealth, as demonstrated by various finds, was manifest at Hatcliffe Top, presumably generated through its agricultural products, but the question arises as to what profits were being made on its agricultural produce and where did the bulk of that wealth go to and in what form was it expressed? There is no known villa near to the Hatcliffe Top site though ongoing work may identify one. There is some indication of vibrancy to villas in fourth century Lincolnshire. Several villas in the historic county and the East Midlands had new mosaics laid in the fourth century, as at Kirmond le Mire, Scampton and Winterton and their dating and sequence has been proposed (Smith 1976; cf. Leahy 2010, 220). Excavations at Deepdale, near Barrow on Humber, in 1981 revealed a sequence of structural remains including stone foundations, together with material culture pointing to occupation in the Late Roman period including the later fourth century though the building may be earlier (Atkins *et al.* 1981). Otherwise, the fourth century is a long period and better definition of ceramic and other chronologies is still needed in order to refine understanding. Leahy sees an evident decline in villas through the later decades of the century (Leahy 2010).

Although the site at Hatcliffe Top faced the North Sea (albeit at a distance across the Marshland) there is little indication of military equipment or weaponry nor of anything 'defensive'. By conventional thinking this was the frontier of Late Roman Britain, subject to periodic raiding and incursions (cf. Mattingly 2006, 235-6). That said, Hatcliffe Top may have been on the 'exposed' eastern fringe of Late Roman Britain, but it may not have been so easy to get to for sea-borne raiders because of shoals, creeks, shallows and meanders, unless one knew the route. If there was a Roman shore fort or similar at New Clee, Cleethorpes as has been speculated or Grainthorpe Haven (Section 11.6.7; Bennet 1999, 28) this may have engendered a sense of security. It is worth noting that the sites at Hobson Way, Stallingborough, and, the ALP4 site, North Killingholme, on the Humber bank, continued till the end of the fourth century judging from the pottery finds, despite close proximity to this coast; with the AMEP2 site, North Killingholme, continuing till at least the mid-fourth century (Field and McDaid 2011, 7; pers. comm. Chris Casswell). With Hatcliffe Top, lying at an arterial crossroads point overlooking

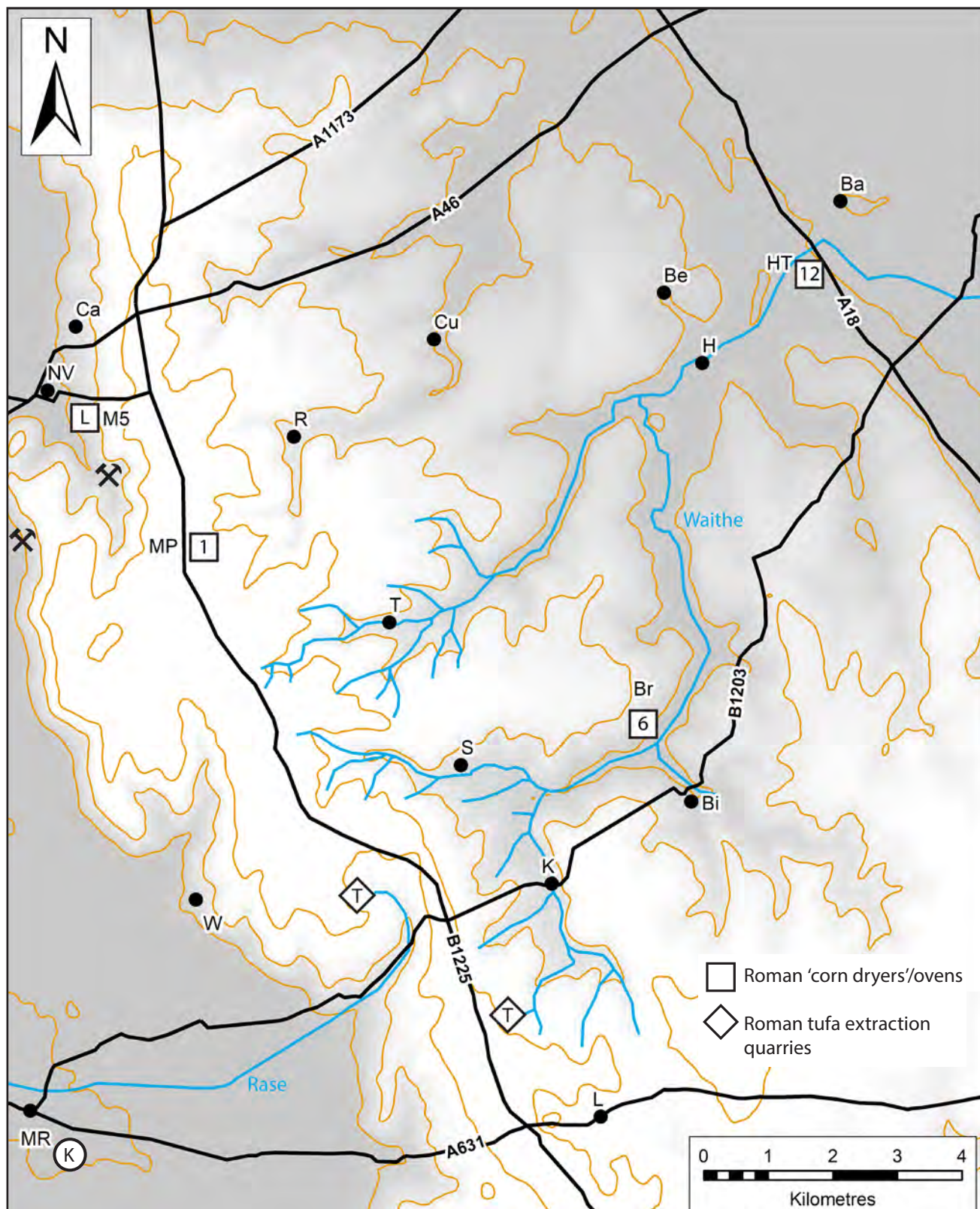


Fig. 11.19 Indicators of the productive Roman era landscape in the area of the Waithe Valley through the Wolds identified by the current Project: 'Corn dryers' and ovens and extractive industries. Modern site abbreviations: Ba - Barnoldby le Beck; Be - Beelsby; Bi - Binbrook; Br - Brookenby; Ca - Caistor; Cu - Cuxwold; H - Hatcliffe; HT - Hatcliffe Top; K - Kirmond le Mire; L - Ludford; M5 - Mansgate 5 (Mansgate Hill); MP - Mount Pleasant; MR - Market Rasen; NV - Nettleton village; R - Rothwell; S - Stainton le Vale; T - Thoresway; W - Walesby. Numbers in square boxes: record the number of dryers/ovens excavated as part of the present project; 'L' in a square box represents likely features of this type indicated by geophysical survey. 'T' in a diamond represents Roman tufa extraction sites recorded as part of this project (see Willis forthcoming a). The hammer and pick symbols indicate likely stone extraction for building material, possible iron smelting and quernstone manufacture in the Nettleton area. (The K in the circle by MR represents the pottery production long known at that location but unpublished).

access to the Waithe valley and beyond that, the relatively rich farm estates of interior Lincolnshire, it might be thought that the site played some role in 'guarding' duties through the fourth century, perhaps particularly at some times rather than others. This is one explanation for the construction of stone walling at Caistor and Horncastle on the western side of the Wolds (Whitwell 1982, 77; Field and Hurst 1983). The site though displays no evidence of robust earthworks to at least hinder raiders, although it is possible that denudation has removed such a trace, with ditches truncated. Elsewhere, at some rural sites in Lincolnshire it has been suggested that Late Roman large scale enclosure ditches are for 'villa defence'. At Norton Disney, south-west of Lincoln, the triple ditches of the mid-fourth century were thought to be for defence, although there is some equivocation in the report; the authors, however, see the villa as coming to a violent (murderous) end around that time (Oswald and Buxton 1937, pl. 45, 157-9). On balance this seems unlikely (cf. Whitwell 1982, 126-7; Leahy 2010, 220) and these features may be more to do with defining status and space. Spearheads or other iron projectile heads, together with certain military fittings are not infrequent at sites of this period (as at Winterton (Stead 1976, fig. 118 no.173 and catalogue) Dalton Parlours (Cool 1990a, 81-2) and Nettleton/Rothwell (see Appendix below). However, at Hatcliffe Top the only items that may suggest a military connection are the bead knob likely to be from a Crossbow brooch (Sections 7.1.2 and 11.7.2) and the second such brooch recovered by metal detecting in the next field to the east, on the other side of the A18 (Section 11.7.2; PAS NLM-67EF4E). Such brooches are traditionally seen as part of the regalia of army officers or state officials (Van Thienen 2017). Individual finds are, though, fairly common at sites of various types and as possible 'stray' examples gleaned by detecting; they may more readily be seen as simply signalling fourth and early fifth century activity. The strap end mount (Item 25 RF 2113) is probably from a Late Roman belt and this may have been the possession of a soldier or officer of the state. Such an interpretation may have been more common a few decades ago. Late Roman military style belt buckles and fittings have been found at Hibaldstow, Dragonby, Stickford, Kirmington and Lincoln, while equivalent straps ends come from Winterton, Keelby and Winterringham (Leahy 2010, 29). Yet, as Kevin Leahy states "...ornate belts were not the sole prerogative of the army and were worn by high ranking civilian officials ... Many of the Lindsey buckles have a rustic quality that makes it unlikely that they were part of official dress" (Leahy 1993, 30). Still, this was a time of periodic political and military

uncertainty and hence it is likely that whatever their original purpose the walling and ditching of Roman Ancaster, Horncastle and Caistor could serve a military role, particularly for the more mobile units of the time. Interesting in this connection, three Late Roman spurs have been recovered at the Roadside Settlement at Ludford between Horncastle and Caistor (Leahy 2010). The distinction between 'military', 'civilian' and militia was in any case blurring by this time.

Hence, Lincolnshire, till the end of the fourth century, was still strongly Roman in many forms and expressions. Change had seemingly occurred, with likely large scale land reorganization earlier in the fourth century. Evidence of a military presence is not marked. Occupation and farming in the Marshland continued at some farms at least despite climate deterioration and sea-level rise. The rural economy shows a trend towards intensification of grain production and cattle raising, spurring patchy prosperity through supplying urban markets and, probably, state commissions/managed distribution.

11.9 The Waithe Valley Through the Wolds in the Roman Era: The Emerging Landscape

Whilst the Central Wolds Project remains ongoing it is instructive to collate some of findings across the area examined. Figure 11.19 shows sites where 'corn-dryers' and ovens have been found during the excavation works and records the number of examples encountered. Examples are suspected at the Roman farmstead site within the field known as Mansgate 5 above Nettleton village on the basis of magnetometry (Willis 2013, section 8.7.1). This figure also shows the general location of likely Roman stone extraction near Nettleton where a variety of strata (including Spilsby Sandstone (used for querns), Carstone, Claxby ironstone, Roach and Tealby Limestone (used for iron smelting and construction)) are exposed. Two Roman sites above spring sources where tufa was being extracted in the Roman period are also shown. Further details of the evidence for this newly recognized extractive industry on the Wolds, discovered as part of the Central Lincolnshire Wolds Project at these latter sites, will be published in the future (Willis forthcoming a). In sum this map shows the processing of grain/agricultural produce associated with farming and mineral extraction for buildings, metals and grinding. Doubtless other sites with similar attributes, but yet to be explored, lie within the mapped area.

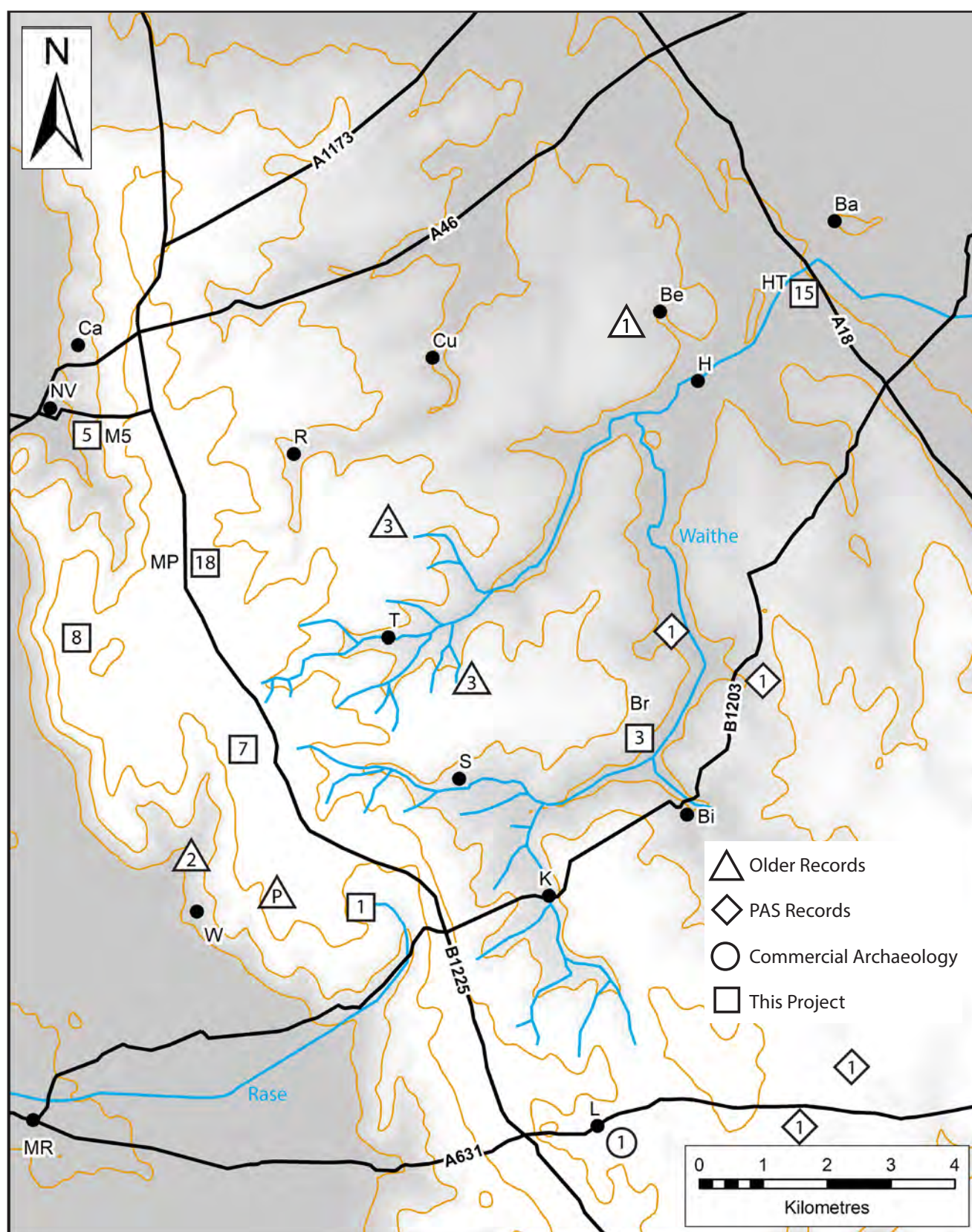


Fig. 11.20 Indicators of the productive (Iron Age and) Roman era landscape in the area of the Waithe Valley through the Wolds: Rotary querns. Modern site abbreviations as Fig. 11.19. Numbers in triangles are older documented examples: south-west of Thoresway ((Dave Everett) *Lincolnshire History and Archaeology* (LHA 6, 1971, 9); north of Thoresway (LHA 6, 1971, 10); by Otby beck north of Walesby ((Mrs E. Cade) LHA 1, 1966, 36); associated with the villa at Walesby (Antiquarian finds (eg. Whitwell 1982, 327)); and west of Beelsby (Loughlin and Miller 1979, 164). Numbers in diamonds are records of surface finds in the PAS: by Calcethorpe with Kelstern PAS 660818; east of Ludford PAS 254351; Swinhope PAS 422492 and 776831. Number 1 in a circle at Ludford came from an archaeological evaluation (Bradley *et al.* 2017). Numbers in squares represent examples recovered through survey and excavation as part of the present project.

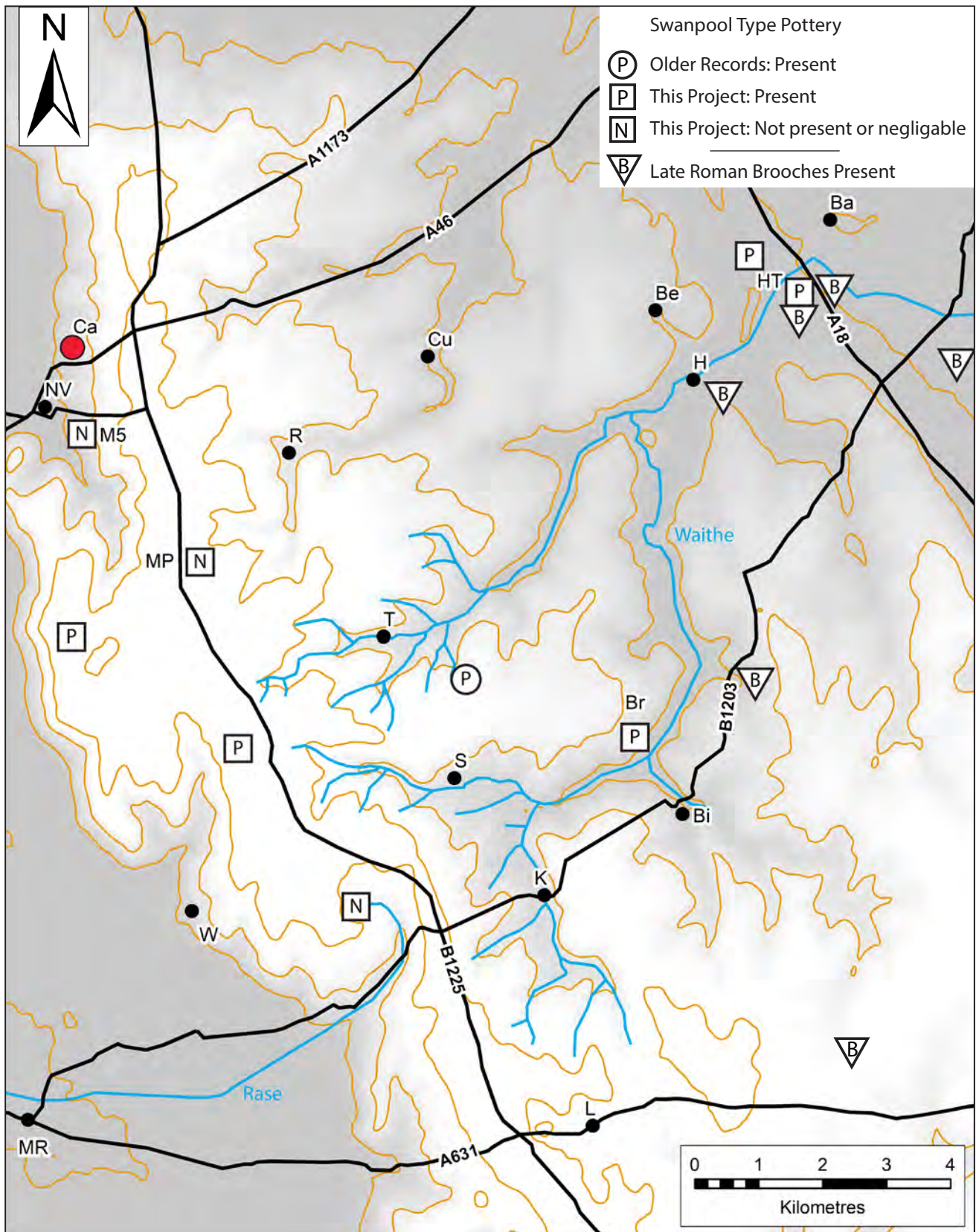


Fig. 11.21 Late Roman sites and find-spots in the area of the Waithe Valley through the Wolds: the occurrence of Swanpool type pottery and Crossbow and other late brooch types. Swanpool pottery: P in a circle symbol denotes older finds near Thoresway by Dave Everett (see Fig. 11.20); letters in square symbols denote sites examined as part of this project with P meaning present and N standing for Swanpool pottery being not present or having only negligible presence. Brooches: B in an inverted triangle denotes the presence of Late Roman brooches (all PAS records bar Hatcliffe Top; see 7.1.2 and 11.7.2 for details; plus the example from Calcethorpe with Kelstern NLM-E41A21). Caistor with its Late Roman walling is marked with a larger red circle.

Figure 11.20 shows the incidence of rotary quern stones of Roman date (perhaps including some that are later Iron Age). No milling stones are known from the area. The figure caption details the various find circumstances. Clearly the Project work has greatly increased the known number. There are a minimum of eight examples from earlier records, five from recent PAS documentation and commercial archaeology (the latter at Ludford) whereas 57 have been found as a result of the current Project. The majority of examples are Greensand, evidently Spilsby Sandstone, and so likely to be from a relatively local source; of the rest the majority occur in 'Millstone Grit'.

Figure 11.21 documents the presence of Swanpool type pottery dating to the later Roman period and Crossbow and some similarly Late Roman brooch types. The incidence shown of Swanpool type pottery highlights sites where there was at least some later Roman activity/occupation and is not chronologically fine as the ware spans the later-third and fourth centuries. Some sites with this pottery were perhaps not extant through the whole of that period. Nonetheless the value of this mapping is that it shows sites that are contemporary with the site at

Hatcliffe Top. Turning to the brooches, the actual numbers are low, but then later Roman brooches, including Crossbow brooches, whilst found with some regularity across the area of Roman Britain, do not occur as finds in large numbers, except at major sites and in some cemeteries. Here the plotted examples suggest an association with the area around Hatcliffe Top, implying a potential fourth century/late fourth century significance to the area, possibly connected to the state/officers of the state; given the small sample size more data will be necessary to verify such a possibility.

Overall, these plots show wide occupation and use of the area, and point to an intensity and diversity of activity. Although a 'work in progress' these distributions confirm the vibrancy of economy and society within and around the Waithe valley in Roman times. This new picture of the community of the valley in this period - arising from the present Project - can be contrasted with the statements of 'absence of evidence' and 'prospect' that were hitherto the prevailing narrative when mentioning the archaeological past on the Wolds. These statements are revisited in the Conclusion which follows.

Chapter 12

Conclusion

Steven Willis

Valleys attract human use and are changed by that use; they are a familiar unit of study for many disciplines. The interplay of such aspects as topographic and soil variations, opportunities for movement, and exploitation of different resources, are standard areas for attention when considering human use of such environments. Economy, cultural expression, change or continuity, the ecological story and the influence of the past upon unfolding futures are dynamics to study in the case of valley landscapes. The background to this project was the striking lack of archaeological investigation of the Lincolnshire Wolds, amid a potential yield of evidence that is vast. Ben Whitwell characterized the meagre state of knowledge for the Roman period forty years ago: *“Rural sites are remarkably absent from the valleys of the Lincolnshire Wolds ... The chances are that such sites as Kirmond le Mire were relatively common in the valleys of the Lincolnshire Wolds as this is a natural place to settle”* (1982, 126-7). The Central Lincolnshire Wolds Research Project has aimed to address this shortfall through fieldwork, data gathering and analysis.

The various lithic items from Hatcliffe Top and adjacent Field 1-2-3 on the north side of the Waithe show human movement and use of the location through later prehistory, with some likelihood of ‘sites’ nearby (cf. Chapter 5). The area of Corner Field, however, seems not to have been favoured, with preference given to the sheltered valleys beyond, facilitating access into and around the Wolds. The finds from around Home Field+ provide some suggestion of this trend. In overview studies of settlement location, such as that of Schofield considering the Late Mesolithic and Early Neolithic (Schofield 1987) or that of Blanning for Kent in the Roman era (Blanning 2014), the importance of water, proximity to variety in resources, and siting by soil/ecological junctions are identified as prominent determinants. The area of Hatcliffe Top fits these criteria. By contrast with the long narrow valley branching off the Waithe to Wold Newton much less is known from surface finds than elsewhere on the Wolds, and it may have been unflavoured as a settlement and activity location for millennia because, in contrast to

other Wolds valleys, it is dry and may well long have been so (cf. Phillips 1989a; 1989b).

As noted above (Section 11.3.2) the magnetometry survey may have detected a round barrow south of the open quarry in Corner Field. Just possibly that could be a Neolithic barrow as one side of the anomaly is unclear, and was possibly open, although it may have been eroded as it lies on the cusp of the plateau before the land falls away to the east. Alternatively it could be an Anglo-Saxon tumulus. No indication of Iron Age settlement or activity was detected by the fieldwork apart from the one coin from metal detecting, and that may well relate to Roman period occupation, and several sherds that could be seen as belonging to an Iron Age tradition (Chapter 6). Substantive evidence for an Iron Age presence in and around the Waithe valley remains elusive (cf. Section 2.2.1).

The evidence recovered shows the site at Hatcliffe Top in the later Roman period was the location of a working rural community. The mixed agriculture practiced at this site was closely related to its locational circumstances, lying between varying environmental zones and at a transport and communications ‘crossroads’. Yet, too it was embedded within, and responsive too, the wider cultural-economic milieu. This will be why the site was developed at this location. The presence of some earlier Roman pottery, including the second century samian ware, implies the possibility of earlier occupation not represented by features caught within the excavated trenches; this putative occupation may have lain elsewhere, such as in the south-west quarter of Corner Field (cf. Fig. 11.1C = Suggested Morphology Period 3, Section 11.3.2). The earliest features encountered, at trenches D and E, were the ditches [4075] and [5022] which yielded relatively few finds and suggest the area investigated by excavation was, at this time, part of a Roman field system of the mid- to later third century or that occupation was further away. After this phase the use of the area of Corner Field becomes intense. Interpreting the faunal and carbonized plant remains from Hatcliffe Top and regional sites is, as noted above (Chapter 8 and Section 11.6) not straight forward: the

dryers and ovens are likely to have had various uses, livestock moved to consumers on the hoof leaving little trace, and milling of grain is more likely at consumer sites (cf. Chapter 8). Ovens and flues cannot be seen as direct indicators of brewing and a secondary product cash source through marketing ale, while caution is necessary before seeing the presence of ceramic cheese presses as catering for demands for preserved dairy products. Yet, whilst more samples and robust data are needed there is an emerging picture from Hatcliffe Top and other later Roman sites in the region, including the Marshland, of horse-rearing, the growing importance of cattle for beef and dairy products (cf Chapter 8; Field and McDaid 2011, 20) and a suggestive increased frequency of strainer vessels and cheese presses. Strainers and cheese press vessels were rare at the earlier Roman Wolds top site at Mount Pleasant (Willis 2013, section 6.1.9.3) and at Lincoln (Darling and Precious 2014, 159), though the latter was a consumer site. These vessels generally become more frequent in the Late Roman period. Cheese presses were manufactured at the Market Rasen kilns in the fourth century and the sites at Brookenby (Fig. 12.1), Hobson Way, Immingham and Glebe Farm each produced a number of examples (Rowlandson 2011; pers. comm. Hugh Winfield; Didsbury nd). To some degree this reflects wider trends in southern and eastern England at this time. In part this shows economic specialization in areas suitable for grazing. Proximity to supplies of sea salt may have been significant for preserving meat, for the market. The ovens at Hatcliffe Top are unlikely to have been dryers for salt manufacture but it is possible that some were used for smoking cheese and beef (cf. above). Cereal crops were an important part of the economy of the site and the ovens/dryers excavated point to storage and processing



Fig. 12.1 The base of a Late Roman cheese press vessel from Brookenby, Trench E, in the Waithe valley.

of grain. This may too have included production for sale or exchange. Taylor has pointed out the 'corn and cattle' culture of Late Roman Britain (Taylor 2007, 115) with evidence for the intensification and extension of production, clearance of wooded areas and large scale crop processing. These developments are evidenced in the trends noted at Hatcliffe Top and in the region. Milling is possible if there was sufficient 'local' demand. In this connection it is worth noting that no Roman stonework or finds (to date) have been recognized in the old watermill structure below the site at Waterdell but it is conceivable that there was a Roman watermill at this location, a predecessor to the post-Roman watermills (cf. Section 2.3.4).

Within this picture the site at Hatcliffe Top was a collection and processing centre either for its own farmed lands or more widely, albeit on a local scale, with finds suggesting a higher status than other settlements of later Roman date in the general area. That said, much more information is needed on the character of the Roman sites near to Hatcliffe Top, all of which, at present, are known only from surface finds (as with Field 1-2-3 (Chapter 9) and sites recorded on Fig. 2.1). The number of coins from the field could suggest periodic exchange occurred on site, perhaps in the form of fairs. Other Late Roman sites excavated in the region with agricultural functions have produced far fewer coins (with only one from Hobson Way and just four from Chase Hill Farm Power Station site, East Halton, despite its long occupation (Field and McDaid 2011, 19)).

Although no buildings were identified in the course of the fieldwork at Hatcliffe Top the signature of occupation and intense activity is apparent in both the sequence and physical density of the features and the variety and quantities of material items. Accordingly, the deduction must be that there was occupation at this site. The indications are that it was a fairly prosperous workaday farm complex and processing centre for livestock and crops. The site was organized on co-axial principles with a central thoroughfare, with access tracks leading to both the adjacent plateau and lower land; there is a clear indication of organization and coherence to the layout of the complex in the north-western quarter of the field. Here sub-rectangular enclosures were probably added when needed; they presumably served a variety of purposes, though prominent amongst the functions will have been stock management (potentially related to local marketing), and were, though the evidence of re-cutting, maintained.

The Roman finds assemblage, from excavation and survey, shows a fair diversity of types but is consistent with a mid-to Late Roman domestic rural context (Chapter 7). The range and composition of the material

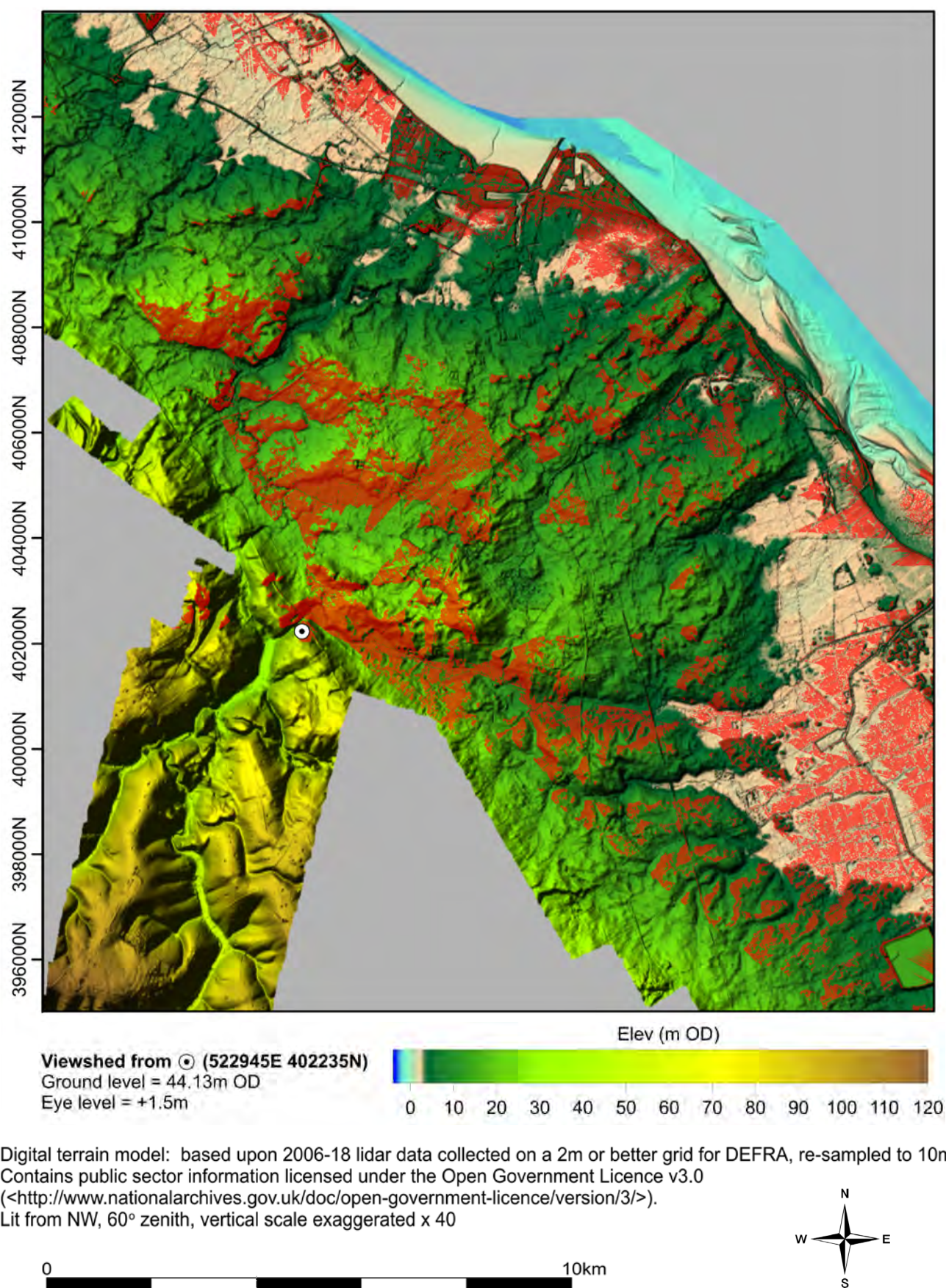


Fig. 12.2 Viewshed plot showing visibility from the site at Hatcliffe Top with the landscape visible from the site shaded in red. This area - the Marshland - east of Hatcliffe Top, was subject to environmental change and perhaps Saxon incursions by the end of the fourth century AD.

assemblage indicates a community integrated into local and wider Romano-British norms: the recovered artefacts tell of choices made by the site inhabitants regarding styles of expression and identity (cf. Brindle 2018). Several of the finds point to personal wealth in terms of the gilded brooch and the gold ring, while other finds of jewellery indicate, by convention, the presence of women and girls. Agricultural productivity is empowering but Hatcliffe Top is typical of many Late Roman farms in so far as it is not clear who the beneficiaries of this output were. As a collection and processing hub was this related only to the farm itself or did it have a wider communal estate role, private or with direct or indirect steering of the Roman state? More knowledge generally is needed in order to address this question.

A series of recent and on-going development-led archaeological investigations in the Immingham-East Halton-North Killingholme-Stallingborough area north-east of Grimsby are revealing a hitherto hardly suspected but complex later Iron Age and Roman landscape of settlement and economy in this low lying Outmarsh area close-by the Humber estuary (Brown 2005; Signorelli and Webb 2005; Jordan 2005; Burglass and Bradley 2006, 253; Wylie 2007; Mason and Burrow 2008, 231). Several of these sites are in part contemporary with Hatcliffe Top (for example, sites examined by Allen Archaeology Ltd at several locations at the Able Logistics Park and Able Marine Energy Park (pers. comm. Chris Casswell)), with farms on the slightly elevated parts overlooking wetland suitable for grazing. Cattle raising, but also to some extent sheep and horse raising is indicated, and evidence of grain crops (perhaps for subsistence use) is apparent from the assemblages. The findings will transform understanding in that area. They are reported too show “limited evidence of structures in the later Roman period and all had extensive enclosure systems probably for the keeping of animal stock although environmental evidence indicates the presence of some arable land in the vicinity” (Field and McDaid 2011, 20; cf. pers. comm. Chris Casswell). The picture is one of a heavily used landscape in the fourth century, despite challenges from its low-lying disposition and vulnerability to inundation from the sea. Elsewhere, however, the area of eastern Lincolnshire lags far behind others for exploration and publication (as Rowlandson and Fisk note above vis-vis pottery studies). This is especially so for the Wolds and Wolds margin.

The Roman coins and pottery from Hatcliffe Top show the same picture in extending to the ‘latest Roman’ in the case of the pottery and to the end of the fourth century in the case of the coins (Chapter 6; Reece period 21, AD 388–402; cf. Table 7.7; Fig. 11.11).

Examples come from the excavated trenches confirming use of the site till the end of the fourth century. When and why the site came to an end, as it seemingly did, is not clear. Circumstances were changing on the east coast by the end of the fourth century AD, economically, politically and in terms of environmental factors. The military and administrative structure and longer distance exchange systems of Roman Britain had fragmented. The Roman army was withdrawn from Britain in AD 407. There was a relative rise in sea level around the North Sea, with temperatures declining (Leahy 2007, 18). Weather is believed to have been stormier and the Marshland was partially inundated with other areas periodically flooded (Ellis *et al.* 2001).

Following these ‘latest Roman’ strands of evidence the next item dated with any precision is the cruciform brooch from the north-east corner of the field by the A18 (Item 64 RF2072) dated by Martin to c. AD 475–550, while the pyramid mount (Item 42, RF30) is later still, probably late 6th century (Chapter 7). This is insufficient to show sustained occupation and the metalwork in question might represent stray finds or perhaps burials hereabouts. As noted above Anglo-Saxon furnished graves are well-attested in the area with a gilded bronze great square-headed brooch of Leeds type B1, plus other brooch types, excavated at Welbeck Hill (Loughlin and Miller 1979, 168; see Section 2.2.3). Another square-headed brooch of Leeds type B1 was recovered at the Anglo-Saxon inhumation cemetery at Laceby in the 1930s (Loughlin and Miller 1979, 170; see Section 2.2.3). More widely, a bronze Anglo-Saxon cruciform brooch is recorded from Owersby, in the Ancholme valley, south-west of Nettleton (Whitwell and Wilson 1969, 117, fig. 4 no. 3). A sixth century Anglo-Saxon brooch was recovered at the recently explored settlement focus at Little Carlton, south-east of Louth (Townend *et al.* 2016, 31).

It might have been speculated that an Early Anglo-Saxon focus lay elsewhere in Corner Field relating to some of the geophysical anomalies, but there is no trace that this was so from surface finds of coins, metalwork or pottery. By the 5th century this area of post-Roman Lincolnshire was developing as part of a new political configuration known as *Linnuis* (Green 2012) but there may have been no community at Hatcliffe Top at that time, before the seeming resumption indicated by the five coins dating tightly to the early 8th century (Table 7.7; Fig. 11.12). (Coins from Little Carlton show a wider date range of c. AD 680–790 (Townend *et al.* 2016)). The presence of a significant quantity of Anglo-Saxon pottery from across parts of the excavated trenches (particularly in modern plough zone and the medieval cultivation soils) and from surface collection (Fig. 3.5) is sufficient to indicate some level of occupation.

Unfortunately the earliest of this material cannot be dated more precisely within a 5th to 8th century envelope (Section 6.2.3). This leaves the possibility that there was some continuity open. Items within the Middle Saxon pottery present are more closely dated and are consistent in date with the coin finds (Section 6.2.4). The few sherds of Late Saxon and Saxo-Norman pottery present (Sections 6.2.5-6) could be ‘background noise’ and derive from manuring associated with the Medieval rig and furrow cultivation readily apparent from the excavation and geophysical survey. The Anglo-Saxon pottery from the fieldwalking is focused along the plateau edge through the middle of the field. The finds evidence suggests occupation/activity of a similar date to that at Riby Cross Roads (Steedman 1994), that is sixth or seventh century through to the mid-ninth century (Section 2.2.3). However, the excavations at Riby Cross Roads revealed clear features of this date and a broader range of finds.

The extent to which the Late Roman settlement pattern in Lincolnshire saw continuity through into the Saxon period and beyond remains an ongoing question (cf. Green 2012). At Hatcliffe Top continuity is possible into the Anglo-Saxon period but is not clearly manifest on the basis of the evidence currently available. Be that as it may, it certainly did not extend beyond the 9th- to early 10th century judging from the pottery finds. Elsewhere Roman finds have been noted at sites with Medieval occupation and indeed some sites that become enduring villages. Is this chance, simply a function of environmental attractions of a locality, inertia due to communications infrastructure etc. or more marked, rooted continuity? Considering the Central Wolds, Roman finds and, according to antiquarian records a mosaic, are noted at Claxby Church in the village below the western Wolds scarp (Willis 2013, 12), while Market Rasen too was a Roman focus, as were Ludford and Caistor (Willis 2013, 12-5; Bradley *et al.* 2017). Within the Waithe valley the presence of surface finds of Roman material by the Medieval complex at Orford is noted above (Section 2.2.2.2). Round Hill (Chapter 9) by Hatcliffe village, may also be relevant with its Roman and Medieval metalwork, suggesting a focus and advantageous position for settlement. Hugh Winfield (pers. comm.) had the impression that most DMVs and Sunken Medieval Villages in the vicinity of Hatcliffe Top produced Roman material in ploughsoils following the drive to arable cultivation around and after World War 2; he pointed to the case of the DMV at Hawerby, by the A18 south of Hatcliffe Top (Fig. 2.1) from where Roman pottery is recorded, found in the 1960s (cf. Whitwell 1982, 248), and more latterly by himself, including sherds of Nene Valley type or Cologne ware together with greywares (pers. comm.). At

Holton le Clay on the Marshland excavations had noted Roman occupation in the area of the village church, as noted above (Section 2.2.3).

Considering the future, the site in Corner Field is relatively well preserved below modern ploughsoil and top soil. This is helped by the fact it lies within a small field and one that has not been ploughed by really heavy machines. There has been erosion along the edge of the plateau running approximately north-south through the field but the worst impact was evidently from the years of rig and furrow cultivation in the Middle Ages. It would be excellent for the curation of the sub-ploughsoil archaeological deposits if ploughing were shallow or if arable cultivation was by direct drilling.

The work at Hatcliffe top was undertaken in order to explore a site on the Wolds as the area has hitherto seen little concerted exploration. Bush has recently summed up the situation: “Lincolnshire is a vast county ... with the Wolds in particular having a wealth of prehistoric and Roman remains [yet] few have been investigated” (Bush forthcoming, chapter 1). The absence of archaeological investigations in the area is emphasized by the fact that only seven sites are listed on the Roman Rural Settlement Survey database (online via the ADS) within a 20km radius of Hatcliffe Top. Of these only two are on the Wolds, one being the Mount Pleasant site (Willis 2013) and a farmstead investigated by evaluation at Great Limber to the north-west of Hatcliffe Top. These sites are both 12km distant from Hatcliffe Top. Other sites comprise Caistor (Willis 2013, section 1.9.1), three on the Marshland comprising the 1950s excavations at North Thoresby (Section 2.2.2.1 above), the site at Aylesby (Steedman and Foreman 1995; Willis 2013, section 1.8) and a site in central Grimsby, (being 12, 5.5, 8 and 9km distant respectively), and the 1977 kiln excavation at Claxby in the Clay Vale 15km to the west of Hatcliffe Top. This picture confirms the hitherto lack of investigation and knowledge of the archaeology of the Wolds.

Commenting on the revelation of the mosaic at Kirmond le Mire over forty years ago Andrew White of Lincoln Museum observed that “the discovery of such a large and hitherto unknown site raises questions about the distribution of settlement and economy of the Wolds in the later Roman period, and clearly there will be more such sites to be found” (White 1976, 63). In fact it was to be more than another thirty years before the next excavation work in the valley on a Roman site took place, this being the site reported here. The investigative work, which began in earnest in late August 2007, was to lead to the discovery of an intensively used relatively short lived Roman site; many more sites of this date, and indeed other dates, lie within the Valley and across this landscape, most yet to be mapped, let alone examined.

Appendix

Mount Pleasant, Nettleton and Rothwell (Willis 2013)

New and supplementary information, subsequent to the publication of 2013

Steven Willis

Excavated profiles of the likely Neolithic quarry ditch flanking a Long Barrow in East Field

The 2013 volume reported a major feature excavated at Trench A in East Field, Mount Pleasant, and interpreted this as likely to be of Neolithic date and a probable quarry ditch flanking a barrow feature, consistent with geophysical results (Willis 2013, 57-65). In that report section drawings recording the profile of the cut and fill sequence were presented (Willis 2013, figs 3.12 and 3.13) but the close similarity with the profiles revealed by Phillips and her team at the Ash Hill and Hoe Hill long barrows (Phillips 1989a) was only mentioned. The opportunity is taken here to show these profiles alongside each other in order to facilitate visual comparison (Fig. A.1). Further details and interpretative points can be found in those two respective publications.

An Iron Projectile Head from Street Furlongs

Subsequent to the publication of 2013 an object of iron was recognized amongst a collection of sundry iron objects in the site archive as a projectile head. It had been recovered by Tony Bibby during metal detecting of ploughsoil during systematic fieldwalking and survey in Street Furlongs. Specifically, this came from Square SF QI (for locations of the squares see Willis 2013, appendix 2) approximately 0.5m east of its western side and 4m north of its southern edge (found in April 2004; NMPA00 2000.194). The item is a small flat-bladed iron projectile head with leaf-shaped blades and a round-sectioned socket (Fig. A.2). Corrosion (with flaking) and fragmentation mean that some detail is missing such as the point; the blade shoulders are rounded and the form appears almond shaped. The socket end is solid (closed) iron and it may be that this was once longer, extending to be a hollow socket. The exact type of weapon this projectile

head comes from is uncertain, and it may be a small spearhead, javelin, bolt or arrow. Length: 73mm, width of blade: 20mm, diameter of socket: 12mm. Weight 25g.

This item from Nettleton/Rothwell is similar to an example from Ickham, Kent (Mould 2010a, 142, fig. 66 no. 4) which is better preserved at c. 92mm in length, with a solid round-end terminal. A projectile head from Winterton villa, identified by Stead as a small spearhead, which closely resembles the Nettleton/Rothwell item, is c. 94mm in length and was attributed a third or fourth century date (Stead 1976, 219, fig. 118 no. 173). Manning classed similar items as spearheads though commenting that they could have been used in various ways (Manning 1985, 163, pl. 76-100; close parallels to the present example are V40, V46, V57 and V61); both Manning and Daniels (in Allason-Jones and Bishop 1988, 103) suggested this type were potentially javelin heads, that is, belonging to throwing spears. Difficulties in classifying such items in general are noted by Mould (2010a, 142a, referencing Marchant 1990, 1-5 and Bishop and Coulston 1993, 69). Dr David Marchant has examined photos of this item and notes that the corrosion and its incomplete nature hinders certainty in its identification; he suggests it is a small spearhead probably from a thrown spear/javelin (pers. comm.). In sum this item is presumably Roman given that its form is similar to that of Roman projectile heads and bearing in mind that the ploughsoil at the Nettleton/Rothwell site has few items of later or earlier date; that said both its find context and its form type do not exclude a different date. A third or early fourth century AD date seems most probable. It is worth recalling that in his comment on the coin list reported in the 2013 volume Richard Reece had suggested there was a hint of late Roman military supply/presence (Willis 2013, section 9.9) while other projectile heads of iron have been collected from Street Furlongs via metal

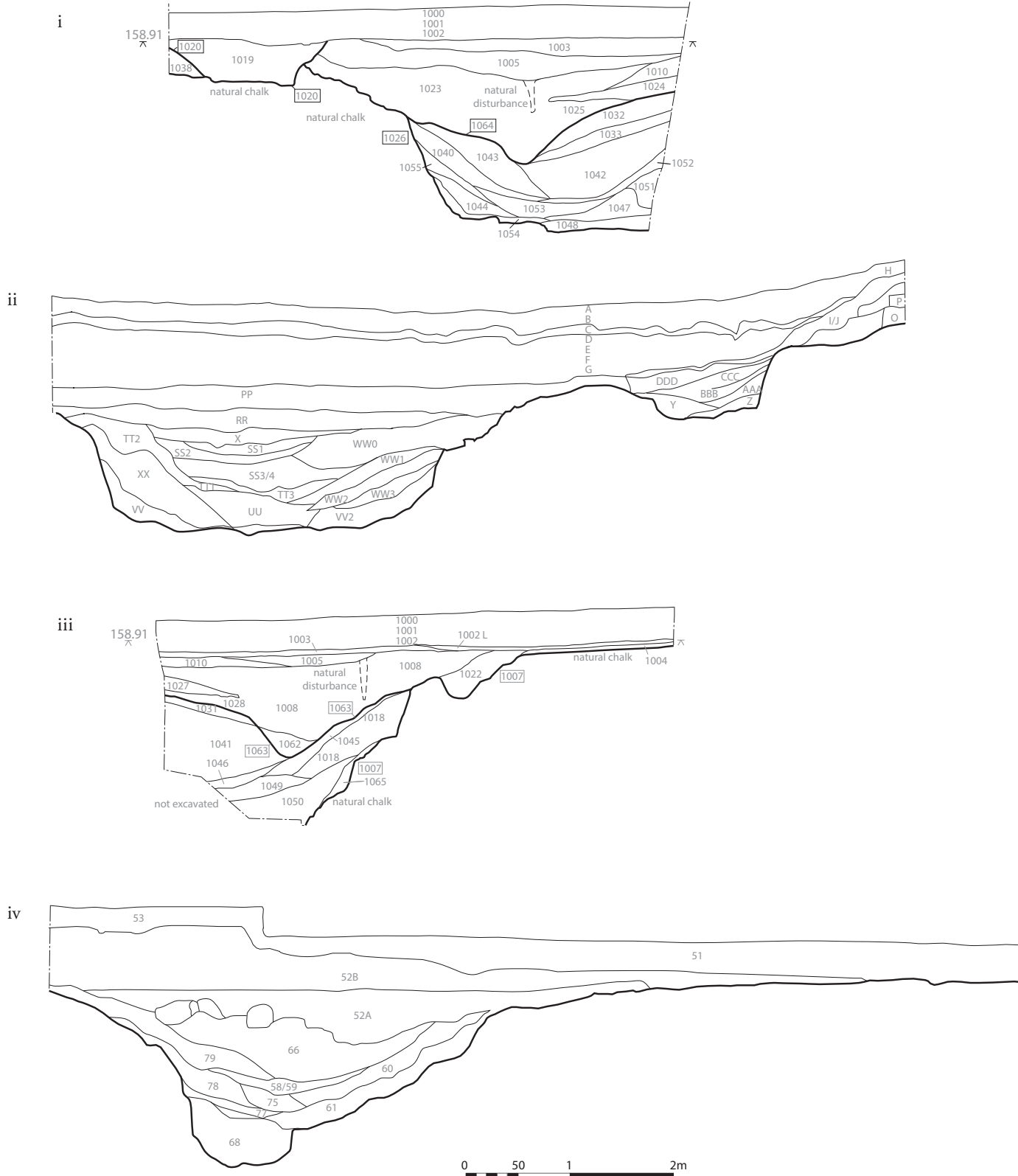


Fig. A.1 Comparison of cut profiles excavated at Mount Pleasant with those of two Neolithic quarry ditches associated with long barrows in the nearby Waithe valley, Swinhope; i. the profile of cut [1026]/[1020] at the northern baulk, Trench A, East Field, Mount Pleasant (Willis 2013, fig. 3.12); ii. the eastern cut profile of the quarry ditch at Hoe Hill (Phillips 1989a, fig. 2.3); iii. the profile of cut [1007] at the southern baulk, Trench A, East Field, Mount Pleasant (Willis 2013, fig. 3.13); iv. the southern cut profile of the quarry ditch at Ash Hill (Phillips 1989a, fig. 3.3).



Fig. A.2 Iron projectile head from Street Furlongs, Mount Pleasant.

detecting, according to the finder, around the time of the survey and excavations, although it has not been possible to verify this assertion.

A further Roman Coin from Street Furlongs

Subsequent to the publication of 2013 a further coin was located in the project archive that had not been recorded in the 2013 list. This had been recovered by eye from ploughsoil during systematic fieldwalking in Street Furlongs. Specifically, this came from Square SF LI (found in April 2004; NMPA00 2000.194). This coin has been identified by David Holman: Coin Period 14, 'Tetricus I', radiate copy, c. AD 274-286, copy of RIC 110, 1.99gm. (See Willis 2013, appendix 2, for the location of the 10m by 10m grid square L1).

An additional note on the Bone Spindlewhorl (Willis 2013, section 6.7.4)

A spindlewhorl fashioned from the naturally round and domed terminal head of a cattle femur was recovered from context (9571) in Trench J at Mount Pleasant, dating to the early Roman period (Cooper 2013, 276, fig. 6.50). Spindlewhorls fashioned from the terminals of animal long bones are perhaps better attested amongst finds assemblages from Roman sites than was suggested in the Nettleton/Rothwell report. Four examples fashioned from femoral heads of cattle reported from Dragonby were referenced (Cooper 2013, section 6.7.4). An unfinished example is recorded from a mid-Roman context at the Culver Street site, Colchester, where the terminal of a cattle femur head had been sawn off and the terminal centrally pierced (Crummy 1992a, 198, fig. 5.63 no.

1722). The lower sides had been roughly trimmed and the item appears to have been rejected at that stage. Another example comes from the Cattlemarket site, Chichester (Down 1989, 208, fig. 27.13 no. 8).

Finds from the early 1980s

In 2017 a significant collection of Romano-British pottery and metal finds of Iron Age to Roman date, gathered from the area of East Field at Mount Pleasant, was shown by the finder to Dr Adam Daubney, the Finds Liaison Officer for Lincolnshire. The assemblage had been amassed during the early 1980s. Accordingly, details of 25 metal items belonging to the collection and documented by Dr Daubney are now posted on the Portable Antiquities Scheme website:

<https://finds.org.uk/database/search/results/finderID/PAS58888549001E22>

Finds arising from Intensive Metal Detecting Survey in Street Furlongs aimed at recovering Iron Objects from the ploughsoil, April 2006

In order to establish a clearer picture of the iron object content of the ploughsoil in Street Furlongs it was decided to collect all iron items (generating a signal on the metal detector) for a sample of four 10m by 10m squares of the fieldwalking grid. With standard detecting on sites of this date machines are customarily set to signal non-ferrous items which may be coins, brooches and so forth. Accordingly, this exercise was instigated to provide some balance and establish an idea of the presence and character of the ferrous material present in the modern agricultural soil. The four squares were selected by random number generation with the survey conducted in April 2006. The squares were spread across the fieldwalked area comprising G5, P4, T1 and V2. The items detected are listed per square in Tables A1- A4 and are summarized in Table A5. A total of 62 items was recovered.

Over half of all the iron objects collected from these four sample squares were nails or nail shanks or likely nail shank fragments, having square-sections tapering to a point (where preserved). These are likely to be handmade nails and whilst certainty is not possible in terms of attributing dates for these basic items the probability is that they are Roman especially given the lack of subsequent activity on or around Street Furlongs other than for agriculture. The better preserved examples are consistent with Manning's Type I (Manning 1976, fig. 11, 41-2) while one or perhaps two fragmentary items could be examples of Manning's Type II. Corrosion makes measuring the

thickness of the shank a matter of approximation. Corrosion can also complicate the designation when cataloguing the items of flattened or pyramidal head. The standardization of nails of the Roman era has been highlighted by Manning (1976, 41) and this is a characteristic seen with this sample, as with the group from T1, as well as those from the excavated trenches (Willis 2013, section 5.4). Two large nails are present amongst these 62 items (P4 item D and V2 item A), being of similar scale indicating the attachment of massive timbers at the site. Two nail heads at least show flattened distortion through hammering, appearing splayed. The large majority of shanks are straight suggesting they were either unused or had remained straight when used and had not been extracted.

Much of the rest of the sample from the four squares comprises small undiagnostic fragments of strips and sheet iron likely to be mainly modern, perhaps some of it lost through normal farming work, and perhaps some introduced with farmyard manure, though the field is generally clear of such introductions. Such pieces are typical of course from intensively exploited arable ploughsoils; perhaps surprising is that there was not more of it, absolutely and proportionately. That, however, reflects the low presence of modern attaching items (nails, screws, bolts and rivets). Amongst these pieces some may be older pieces from tools etc. such as harvesting tools. Only one 'machine part' was recovered, a harrowing claw resembling the item found caught in the foundation of the north wall of the Roman building in Trench J. The knife blade is of a generic type and happens to be heavily corroded; it is potentially Roman. Such an attribution is less likely to be the case with the chisel or screwdriver like items, although a small proportion of Roman nails are known to have had such a tip (Manning 1985, 135, type 6) and it may be a chisel older than of modern date. In terms of weight the absolute totals for the iron objects were modest and in a relatively tight range: G5: 75g, P4: 270g, T1: 189g, V2: 174g (the latter excluding the 338g of modern slag). The overall total of 708g gives an average weight for the 59 non-slag items of 12g and each square's item total calculates to a figure close to the overall average item weight.

Considering the finds by area G5 lay c. 45m east of the modern road and approximate location of the Roman road frontage and within the area covered by geophysical surveying (Willis 2013, appendix 2). This square lay in an area of the site otherwise yielding relatively high amounts of Roman material culture. G5 produced a tally of 102 items of Roman pottery, giving a ratio of iron artefacts to Roman pottery from this square of 1:13. Of the eight iron artefacts

collected seven were nails or probable nail shanks all potentially Roman. The plate metal fragment might also be Roman though that remains uncertain. The iron finds therefore are consistent with the other cultural indicators. P4 lay c. 45-50m east of the modern road and approximate location of the Roman road frontage and c. 55m south of G5. Again this was within the area covered by geophysical survey with this square lying in an area producing high amounts of Roman material (Willis 2013, appendix 2). P4 produced 96 sherds of Roman pottery and 23 iron items, the highest number amongst the four samples, giving a ratio of iron items to sherds of 1:4. Of the 23 iron artefacts ten were nails or probable nail shanks potentially Roman. Other Roman or likely Roman items were a hobnail and a knife blade end. Modern items, including fittings plus amorphous items account for 11 of the collected iron items, approximately half the total for the square. This pattern is in contrast with the other three squares of the survey which have few such modern pieces. An explanation may lie in the fact that P4 lies near to a former modern field boundary that divided off the southern part of Street Furlongs, with this erstwhile southern field known as 'Blacklands' (Willis 2013, section 1.14). Field edges are often observed to have accrued higher amounts of modern artefact detritus so this may be such an example, or perhaps these items were introduced with farmyard manuring. Square T1, located some 35m south-west of P4 and c. 20m east from the road, lay near to the likely Roman road frontage in an area where the geophysical survey indicates property plots for Roman era buildings (Willis 2013, fig. 2.7 and appendix 2). Some 75 sherds of Roman pottery were recovered from this square. Of the 14 iron objects recovered 11 were nails or likely nail shanks all potentially Roman; in fact this square produced the best preserved group of such nails. The ratio of iron to sherds was 1:5 so similar to square P4. This strong presence of nails is consistent with there having been a Roman era building in this general locality, in a position consistent with the evidence of buildings in Trenches I and J between which T1 was located. The three other iron artefacts collected from this square were undiagnostic.

Of the 17 iron items from square V2 three were modern slag meaning that with those discounted the number is the equivalent to T1, however, the composition is at variance. This square lay around 20m east of the modern road opposite the entrance to the modern quarry road to Nettleton Bottom Quarry and c. 115m north of Trench J (Willis 2013, appendix 2). Material culture was still quite strongly present well to the north of this location although at

this specific location the frequency was reduced (e.g. Willis 2013, figs 6.10 and 8.5). Nail shanks/possible nail shanks account for only four items with no unequivocal nails or nail heads. Four modern items were present amongst the iron objects and several undiagnostic items were also present. The chisel-like item might potentially be Roman. Some 26 sherds of Roman pottery came from this square giving a ratio of sherds to iron items of 1.5:1, markedly the lowest ratio of the four sample squares: It seems in sum unlikely that there was a Roman era building

in the near vicinity and indeed the geophysical results indicate there was a likely trackway at this location, probably contemporary with the Roman era occupation (Willis 2013, fig. 2.7). Considering the exercise overall and the ratio data, this outcome is a pointer to a means to explore the archaeology of the site further, by non- intrusive methods. Robust trends in the case of this site would only be apparent from much more extensive sampling by similar means. Decisions towards such a survey need to weigh the time this exercise takes.

Table A1 Street Furlongs Intensive Metal Detecting Survey for Iron Objects, Square G5.

Key to Tables A1-A5: L = length in millimetres; W = width; D = diameter; T = thickness; Wt. = weight in grams. Note that the shanks of square-sectioned nails typically taper. Measurements for width and thickness of nail shanks and dimensions of heads are approximate given the presence of corrosion.

Square G5								
Item	Type	L	W	D	T	Wt.	Details	Date
A	Fragment of nail shank	30	6		6	4	Square in section; broken before tip; straight	Undated; probably Roman
B	Nail head and top of shank	19	5.5		5	5	Head sub-rectangular and splayed; shank square in section	Undated; probably Roman
C	Probable fragment from a nail shank	32	5		5	2	Square in section; broken before tip; straight	Undated
D	Nail head and top of shank	23	5		4	8	Head incomplete; shank square in section	Undated; probably Roman
E	Fragment of nail shank	33	5		5	3	Square in section; broken before tip; straight	Undated; probably Roman
F	Fragment of nail shank	56	6		5	12	Square in section; tapers towards tip which is missing; straight	Undated; probably Roman
G	Fragment of nail shank	38	5		4	5	Square in section; tapers towards tip; slightly bent	Undated; probably Roman
H	Fragment of Fe plate for attachment	48	38		6.5	36	An end of an attachment plate with mitre/arrow shaped terminal; broken across width; pierced (possible fretting) with an apparent small securing pin	Undated

Table A2 Street Furlongs Intensive Metal Detecting Survey for Iron Objects, Square P4.

Square P4								
Item	Type	L	W	D	T	Wt.	Details	Date
A	Nail	67		3		5	Complete; circular head 7mm in diam.; bent in s-shape	Modern
B	Fragment of nail shank	84	5.5		5.5	20	Square in section; tapers to tip; straight	Undated; probably Roman
C	Nail	62	5		5	10	Complete; square head 15 x 12mm; shank square in section; bent in s-shape	Undated; probably Roman
D	Head and part of shank of very large nail	54	11		11	54	Square head 23 x 17mm; shank square in section; slightly bent	Undated; probably Roman
E	Fragment of nail shank	37		5		2	Tapers to tip; corrosion products include mineralized form of wood	Modern
F	Shank of nail	34	4.5		4.5	2	Square in section	Undated; Probably Roman
G	Tip of nail	25	4		4	2	Square in section; tapering to tip	Undated
H	Fragment of Fe object	44	19		4	15	Flat; broken at its broadest point; the outer edge curves; the inner edge is almost straight but curves slightly outward	Modern?
I	Screw	23		6		4	A short stubby screw with round head 10mm in diam.	Modern
J	Fragment of nail shank	47	5		4	6	Square in section; broken at both ends	Undated; probably Roman
K	Tip of harrow claw	69	14		12	34	Square in section; the shaft tapers to a point	Modern
L	Nail head and top of shank	20	7		5	3	Square head 11 x 10mm; shank square in section	Undated; Probably Roman
M	Nail shank	40	8		6	7	Short seemingly complete nail shank; square in section	Undated; probably Roman
N	Small block	18	9		5.5	7	Slightly broader at one end	Modern?
O	Nail	52	7		7	11	Rectangular head (possibly incomplete); square in section; shank is bent 45°	Undated; Probably Roman
P	Nail head and top of shank	38	7.5		6	11	Sub-square pyramidal head 18 x 14mm; square in section	Undated; probably Roman
Q	Hobnail	15 bent		1.75		1	Domed head 9.5mm in diam.; shank is bent 45°	Roman
R	Fragment of a clip	45 bent	7		2.5	5	Strip-like with part of a straight side from which a curving terminal projects	Modern
S	Fragment of Fe strip	36	13		7	11	Short thick strip	Modern?
T	Small lump	20	13		11	6	Sub-rounded form	Undated
U	Fragment of a bracket	41	19		9	18	Part of a modern bracket with hole for attachment	Modern
V	Knife blade end	40	17		2	8	Broken; the back is straight and the blade curves to meet it at a tip	Undated; possibly Roman
W	Fragment of strip	76	31		1.5	28	Thin regular broad strip	Modern

Table A3 Street Furlongs Intensive Metal Detecting Survey for Iron Objects, Square T1.

Square T1								
Item	Type	L	W	D	T	Wt.	Details	Date
A	Nail	79	5		5	20	Complete; square pyramidal head 14 x 13mm; shank square in section; straight	Undated; probably Roman
B	Nail	90	8		7	19	Complete; square pyramidal head 16 x 15mm; shank square in section; straight	Undated; probably Roman
C	Nail	82	6		5.5	20	Complete; square pyramidal head 17 x 15mm; shank square in section; straight	Undated; probably Roman
D	Nail	75	6		5	19	Complete; square pyramidal head 17 x 16mm; shank square in section; straight; tip poss. missing	Undated; probably Roman
E	Nail	60	5.5		5.5	14	Complete; square head 13 x 11mm; shank square in section; straight	Undated; probably Roman
F	Nail head and top of shank	35	6		5	13	Head sub-rectangular and splayed on one axis 26 x 11mm; shank square in section	Undated; probably Roman
G	Nail	51	5		4.5	10	Sub-square somewhat pyramidal head 16.5 x 14mm; square in section	Undated; probably Roman
H	Wedge shaped fragment	40	18		13	34	Slightly concave on its longer axis	Undated
I	Strip of Fe, possibly a nail shank	43	5		5	7	Square in section	Undated
J	Amorphous lump	32	22		14	18	Irregular fragment	Undated
K	Wedge shaped fragment	24	22		4	7	Fairly thin strip; tapers from 24 to 16mm where it is possibly broken	Undated
L	Probable nail shank frag. with tip	30	5		4	2	Square in section and tapering to a tip	Undated
M	Short length of Fe	24	7		6	4	Square in section	Undated
N	Short length of Fe	16	5		5	2	Square in section; possibly a part of a nail shank	Undated; Possibly Roman

Table A4 Street Furlongs Intensive Metal Detecting Survey for Iron Objects, Square V2.

Square V2								
Item	Type	L	W	D	T	Wt.	Details	Date
A	Shank of spike or very large nail	168	7.5		7.5	48	Square in section; consistent taper to a point; slightly bent	Undated; Probably Roman
B	Fragment of Fe object	29	12		4	3	Broadens at one end; possible head and part shank of a modern floorboard or Manning Roman Type II nail	Undated
C	Bolt head and shank	49	5.5		5.5	11	Dome head 13mm in diam.; square in section; broken?	Modern?
D	Slag	78	50		48	202	Irregular fragment	Modern
E	Nail head and top of shank	30		3		3	Circular head 6mm in diam.	Modern
F	Fragment of strip or plate	23	20		3	3	Flat	Modern?
G	Nail shank	40	6		6	7	Square in section; tapers to point	Undated; probably Roman
H	Thin strip	45	5		4	4	Bent at one end	Modern?
I	Fragment of a strip	32	5		4	3	Square in section; possibly a nail shank fragment	Undated
J	Short length of wire	30		3.5		1	Circular in section	Undated
K	Slag	50	28		16	49	Amorphous fragment	Modern
L	Part of Fe Object	25	18		12	18	Square in section; broader at one end	Modern?
M	Lozenge shaped object	35	27		8	22	Flat	Modern?
N	Broad strip or plate	35	21		4	25	Flat	Modern?
O	Chisel, screwdriver shaft or wedge end	60		8		23	Pencil shaped with one end tapering to a 'blade'; 7.5mm broad. If screwdriver, for slotted/grooved screw	Undated; Possibly Roman if not a screwdriver
P	Possible nail shank	35	5.5		5.5	3	Square in section; bent	Undated
Q	Slag	65	40		30	87	Sub-rounded	Modern

Table A5 Summary of the items from the Intensive Metal Detecting Survey for Iron Objects, in Street Furlongs, April 2006.

Category	Square	G5	P4	T1	V2	% of total fe finds
Nails (square-sectioned shanks; square heads)			2	6		12.9
Nail heads with part shank (square-sectioned)		2	3	1		9.7
Nail shanks including possible nail shanks (square-sectioned)		5	5	4	4	29.1
Hobnail			1			1.6
Knife blade			1			1.6
Chisel					1	1.6
Attachment plates		1			1	3.2
Modern bolts, nails and screws			3		2	8.1
Modern fittings			4		2	9.7
Modern agricultural equipment			1			1.6
Misc. Fe objects			2	2	4	12.9
Amorphous objects			1	1		3.2
Modern slag					3	4.8
Total		8	23	14	17	100.00

Résumé

Ce volume est le premier de deux ouvrages étudiant la vallée de Waithe lorsqu'elle traverse les coteaux/collines du Lincolnshire Wolds. L'oeuvre se concentre principalement sur les travaux de terrain et les trouvailles à la limite des marais. L'analyse a été déployée dans le cadre du projet « Lincolnshire Wolds » qui examine actuellement un paysage peu exploré par l'archéologie, mais qui contient un potentiel considérable et promet des découvertes de grande envergure.

Ce premier livre présente l'évolution de la présence humaine et de l'utilisation de la vallée et de ses affluents, tout en prenant en compte les preuves archéologiques et historiques connues, de la préhistoire jusqu'à des temps plus récents, sous ses diverses formes. L'attention se détourne ensuite vers les découvertes archéologiques provenant de Hatcliffe Top et de ses alentours, aux limites orientales des Wolds. Le site de Hatcliffe Top est lui-même situé dans le nord-est du Lincolnshire (NGR TA 229 021), actuellement dans un paysage constitué de terres arables. Ici, des prospections géophysiques, pédestres et des fouilles ciblées menées entre 2005 et 2016 révèlent un ensemble daté de la fin de l'époque romaine, occupée de façon extensive. Le site est localisé immédiatement au-dessus de la route d'accès nord-sud, connue sous le nom de Barton Street, qui avance parallèlement à la limite orientale des Wolds, lorsqu'elle traverse la rivière Waithe Beck. Désormais dénommée A18, Barton Street est communément perçue comme une ancienne voie de communication, par exemple présentée par Todd, May et Whitwell comme une route romaine avec de probables origines préromaines (Todd 1973, fig. 8; May 1976, 9, fig.4; Whitwell 1982, fig. 8; 2001, 15). Consécutifs à des prospections systématiques du terrain, de la mise en place d'une tranchée d'essai et de l'évaluation des objets archéologiques recueillis, six tranchées ont été ouvertes et entièrement fouillées à la main, dans le cadre d'un exercice de recherche et de formation. Ces interventions faisaient partie d'un projet commun, mené par les équipes de l'Université du Kent et la Société d'Archéologie et d'Histoire Locale du Nord-Est du Lincolnshire (NELALHS). Les travaux étaient dirigés par Steve Willis et David Robinson. La recherche et la formation, ainsi que la possibilité de participer gratuitement à cette opportunité de découverte et d'apprentissage, constituaient les aspects essentiels d'une initiative qui associait archéologues expérimentés ou ceux qui voulaient améliorer leurs compétences, mais aussi étudiants, bénévoles et débutants. Les travaux ont mis au jour des restes relativement bien conservés et couvrant le Haut et Bas-Empire, ainsi qu'un éventail d'artéfacts montrant

l'utilisation du site durant la période anglo-saxonne. Les principales trouvailles remontent au IV^e siècle, en particulier la fin de ce siècle, une époque à laquelle le site aurait été, d'après les récits conventionnels, en première ligne de l'Empire romain, faisant face aux incursions barbares venant de la mer du Nord.

Les fouilles ont permis de répertorier des vestiges correspondant aux multiples traces détectées par les prospections géophysiques. Les travaux ont surtout aidé à définir et cartographier un habitat du Bas-Empire, ainsi que son organisation parcellaire, représentée par des enclos.

La géophysique a démontré que les anomalies étaient présentes en grand nombre sur la totalité des parcelles inspectées, suggérant une utilisation antérieure du site durant la préhistoire tardive, révélant ainsi une longue durée d'utilisation de la zone. Les découvertes datant de la période romaine incluent une série de fours, dont certains relativement bien conservés, d'autres sans doute associés à la pratique du séchage de céréales, auxquels s'ajoutent une probable aire de battage et ses dépôts, riches en restes carbonisés. Les restes archéobotaniques indiquent la existence d'une culture céréalière, pour laquelle une large partie des produits a été identifiée. Des restes fauniques signalent la pratique de l'élevage, avec une spécialisation tournée vers les bovins et peut-être même les chevaux. L'examen de ces différents ensembles permet de mieux comprendre le paysage et l'économie de ce complexe agricole de la fin de l'époque romaine, ainsi que certains aspects du commerce au sens large. La détection systématique des métaux sur le site a permis de récupérer plus de cent quatre-vingts pièces de monnaie, dont la plupart datent de la période romaine. Ces trouvailles, en plus de différents objets métalliques, sont présentées associées à des séries de céramiques, stratigraphiquement datées.

Deux autres sites, révélant des restes de l'époque romaine, ont été répertoriés dans les environs. Un premier, connu grâce à des prospections en surface, localisé dans la paroisse de Beelsby, sur la rive opposée de la vallée où se situe le complexe de Hatcliffe Top, est considéré comme ayant produit des monnaies et de la céramique romaine. Ce lieu a aussi livré un outil en pierre de Cumbrie, datant de l'époque néolithique. Des découvertes en surface dans la région de Round Hill près du village de Hatcliffe sont également signalées, dont une tablette de malédiction illettrée. Dans l'ensemble, les données sont présentées de manière exhaustive et leur interprétation est sujette à discussion, tout en les associant à leur contexte historique et archéologique au sens le plus large. Ainsi émerge l'image d'un paysage peu exploré jusqu'à présent.

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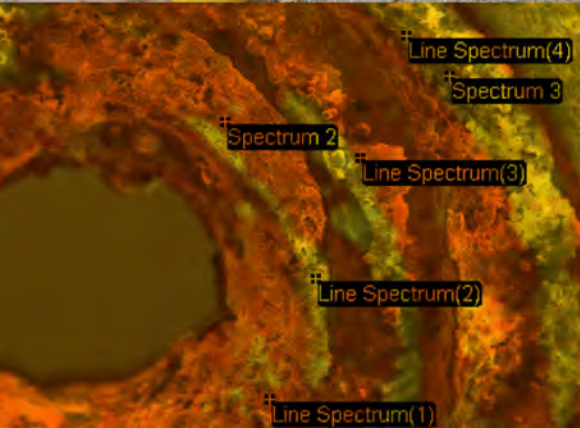
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This volume is the first of two examining the archaeology of the Waithe valley as it passes through the central Lincolnshire Wolds. This initial volume concentrates on fieldwork and finds at the eastern edge of the Wolds just before the Waithe progresses to the Marshland. The study was undertaken as part of the Central Lincolnshire Wolds Research Project which is examining a landscape little explored archaeologically but which holds important evidence and potential.

The volume begins by documenting the development of the human presence and use of the valley and its tributary systems, noting the known archaeological and historical evidence from prehistory to recent times in its various forms. The attention then focuses on the archaeological evidence from Hatcliffe Top and surrounding area, on the eastern Wolds margin. The archaeological site at Hatcliffe Top itself lies in North East Lincolnshire in a cultivated arable landscape. Here geophysical survey, fieldwalking and targeted excavations between 2005 and 2016 revealed an intensively used complex of the later Roman era. The site lies immediately above the north-south access route known as Barton Street, which runs parallel with the eastern edge of the Wolds, as it crosses the Waithe Beck. Now designated the A18, Barton Street is, by convention, believed to have been an ancient route-way. Following fieldwalking, a trial trench and assessments of the collected finds, six excavation trenches were opened and entirely hand-dug as a research and training exercise. The fieldwork was a joint undertaking combining teams from the University of Kent and The North-East Lincolnshire Archaeology and Local History Society (NELALHS) directed by Steven Willis and David Robinson. Research and training were key aspects of an initiative that combined experienced fieldworkers, those enhancing their skills, students, volunteers and beginners. The work revealed comparatively well-preserved remains spanning the mid- to Late Roman period with a range of artefactual evidence for the use of the site in the Anglo-Saxon period. The main evidence dates to the fourth century, especially the later fourth century, an era when the site would, by conventional narratives, have been on the front line of the Roman Empire, facing barbarian incursions from the North Sea.

Geophysics showed a palimpsest of anomalies indicating the developing morphology of the site. The investigative work led to the mapping of a coherent Late Roman settlement and field system with associated enclosures. The evidence included a series of ovens, some of which at least were associated with corn-drying and deposits rich in archaeobotanical carbonized remains. Faunal remains indicate livestock raising, with a likely focus upon cattle and probably horses. Examination of these various assemblages provides an understanding of the landscape and economy of this later Roman farming complex and something of the wider 'commercial' regime. Systematic metal detecting across the site assisted in the recovery of over one hundred and eighty coins, the large majority of Roman date. These, plus other metalwork, are reported, together with stratified pottery sequences.

Two nearby locations with further evidence of Roman date are also reported. Overall, the discoveries are discussed, while their interpretation is set against the broader historical and archaeological context. A new picture emerges of an archaeological landscape hitherto largely unrecognized.

ISBN 978-1-9996155-4-3



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