



Archaeological excavations at Shelford Farm landfill site, Broad Oak, Canterbury, Kent 2003–2007

Report No. 17/115

Author: Jim Brown

Illustrators: James Ladocha & Jim Brown



© MOLA Northampton
Project Manager: Jim Brown
Site Code: SFB03, SFE03, SETC03 and SFB04
NGR: TR 16099 60666

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN 01604 809800
www.mola.org.uk
sparry@mola.org.uk

**Archaeological excavations
at Shelford Farm landfill site, Broad Oak
Canterbury, Kent
2003–2007**

Report No. 17/115

Quality control and sign off

Issue No.	Date approved	Checked by	Verified by	Approved by	Reason for Issue
1	9-Jan-18	Rob Atkins	Adam Yates	Andy Chapman	Draft report for KCC

Author: Jim Brown

Illustrators: Jim Brown & James Ladocha

© MOLA Northampton 2017

MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN
01604 809800
www.mola.org.uk
sparry@mola.org.uk

STAFF

Project Managers	Adam Yates BA MCIfA & Jim Brown BSc PGDip MCIfA
Fieldwork	Simon Carlyle BSc MSc MCIfA MEnvSc, Chris Jones, Steve Morris, Jim Brown, Carol Simmonds BA ACIfA, Rob Smith, Peter Cinquini BSc, Rosemary Jones BA PCIfA, Paul Kajewski BA PGDip, Adrian Burrow MA Anna Doherty, Sam Hepburn BA PGDip, Jennifer Jackson, Simon Pillar BSc, Karen Deighton MSc, Nathan Flavell BA PGDip, Susan Hill BA, Ben Pears MSc, Rebecca Pullen BSc, Giles MacFarland BA, Pete Sprenger BSc, Adam Yates, Theodora Anastasiadou BA MA MA, Neil Guiden BSc, David Leigh BA, Ailsa Westgarth BSc, James Aaronson BA & Mark Patenall
Text	Jim Brown
Flint	Yvonne Wolframm-Murray BSc PhD
Burnt flint	Alex Thorne BSc
Quernstone	Andy Chapman BSc MCIfA FSA
Prehistoric and Roman pottery	Anna Doherty BA MA
Saxon, medieval and post- medieval pottery	Luke Barber BSc MCIfA
Tile, brick and fired clay	Pat Chapman BA CMS ACIfA
Metal, glass and other finds	Tora Hylton
Plant macrofossil remains	Val Fryer BA MCIfA
Charcoal	Imogen van Bergen Poole BSc PhD FLS
Illustrations	Jim Brown, Amir Bassir BSc and James Ladocha BA

OASIS REPORT FORM

PROJECT DETAILS		OASIS No: Molanort1 – 296555	
Project name	Archaeological excavations at Shelford Farm landfill site, Broad Oak, Canterbury, Kent, 2003–2007		
<p>Archaeological mitigation works were undertaken from 2003–2007 at the former Shelford Farm Estate, Broad Oak, Canterbury, and in advance of the gradual phased expansion of the landfill site. Successive detailed excavations were undertaken to investigate the principal concentration of features located upon the hilltop and on the surrounding slopes.</p> <p>A late Bronze Age ring ditch was located immediately adjacent to the site of a previously excavated enclosed cremation cemetery. Outside this enclosure were pits containing large quantities of pottery and other shallow pits, possibly for extracting clay, which indicated contemporary non-funerary occupation.</p> <p>In the late Iron Age/early Roman period the hilltop was probably grazing land, incorporated into a field system that extended northwards. There may have been a large rectangular enclosure with a trackway orientated downslope to the south-east in the direction of a previously excavated early Roman farmstead. At its north end there was a boundary junction where small enclosures and entrances between fields provided indications of livestock management.</p> <p>There appeared to be little activity in the post-Roman era, allowing for five centuries of woodland regeneration. Scattered isolated pits were dispersed across the hilltop and upon the slopes that were rich in oak charcoal derived from burning seasoned logs. Radiocarbon analysis demonstrated a range of dates spanning the 7th–12th centuries during which it is thought likely the site was occupied by managed woodland.</p> <p>At least a portion of this had been cleared by the 13th–14th centuries to make way for a smallholding adjoined by several small enclosures. The former Shelford Farm has removed all evidence of medieval structures, but for which a large quantity of domestic cooking pots and storage jars were found in nearby features. Occupation ceased in the 14th century and there was no evidence for continuity with the modern farm.</p>			
Project type	Area excavation and watching brief		
Site status	None		
Previous work	Rady 2002; Boden 2003; Boden and Rady 2003; Scott <i>et al</i> 2003		
Current land use	Formerly farmland		
Future work	None		
Monument type/period	Bronze Age, Roman, medieval and post-medieval		
Significant finds	Flint, pottery, tile, glass, metal finds, flots and charcoal		
PROJECT LOCATION			
County	Kent		
Site address	Shelford Farm Estate		
Study area	c10ha		
OS NGR	centred on TR 1610 6070		
Height	c40–50m above Ordnance Datum		
PROJECT CREATORS			
Organisation	Northamptonshire Archaeology (now MOLA, Museum of London Archaeology)		
Project brief originator	Simon Mason, Kent County Council		
Project Design originator	Simon Johnson, John Samuels Archaeological Consultants		
Director/Supervisors	Jim Brown, Simon Carlyle, Chris Jones & Steve Morris, Northamptonshire Archaeology		
Project Managers	Adam Yates & Jim Brown, Northamptonshire Archaeology		
Sponsor or funding body	Viridor Waste Management		
PROJECT DATE			
Start date	February 2003		
End date	May 2007		
ARCHIVES	Location (Accession no)	Content (eg pottery, animal bone etc)	
Physical	CANCM 2003.113	Flint, pottery, tile, glass, metal finds, flots and charcoal	
Paper		Context sheets, permatrace plans & sections, site registers, photographic archive, background documents	
Digital		Client PDF report	
BIBLIOGRAPHY			
Journal/monograph, published or forthcoming, or unpublished client report			
Title	Archaeological excavations at Shelford Farm landfill site, Broad Oak, Canterbury, Kent, 2003–2007		
Serial title & volume	MOLA Northampton report 17/115		
Author(s)	Jim Brown		
Page numbers	79		
Date	09 January 2018		

Contents

1	INTRODUCTION	
2	ARCHAEOLOGICAL BACKGROUND	
2.1	Kent Historic Environment Record	
2.2	Ordnance Survey evidence	
2.3	Topography and geology	
3	EXCAVATION STRATEGY	
3.1	Objectives	
3.2	Methodology	
4	THE EXCAVATED EVIDENCE	
4.1	Summary of the site chronology	
4.2	A late Bronze Age ring ditch, boundaries, pits and gullies	
4.3	Late Iron Age/early Roman field system	
4.4	Middle to late Saxon, Norman and early medieval activity	
4.5	Medieval settlement	
4.6	Post-medieval and modern settlement	
5	THE FINDS	
5.1	Worked flint	by Yvonne Wolfram-Murray
5.2	Burnt flint	by Alex Thorne
5.3	Bronze Age pottery	by Anna Doherty
5.4	Fired clay	by Pat Chapman
5.5	Late Iron Age and early Roman pottery	by Anna Doherty
5.6	Late Iron Age and Roman finds	by Tora Hylton
5.7	Roman ceramic tile	by Pat Chapman
5.8	Saxon, medieval and later pottery	by Luke Barber
5.9	Medieval brick and tile	by Pat Chapman
5.10	Quernstone	by Andy Chapman
5.11	Other finds	by Tora Hylton
6	THE ENVIRONMENTAL EVIDENCE	
6.1	Plant macrofossil remains	by Val Fryer
6.2	Charcoal	by Imogen Poole
6.3	Radiocarbon determinations	
7	DISCUSSION	
	BIBLIOGRAPHY	

Tables

Table 1:	Historic Environment Record data
Table 2:	Site chronology
Table 3:	Charcoal-rich pits from the 2003 excavations
Table 4:	Quantification of worked flint
Table 5:	Quantification of fabrics from late Bronze Age contexts
Table 6:	Quantification of fired clay
Table 7:	Quantification of fabrics from late Iron Age/early Roman contexts
Table 8:	Characterisation of pottery assemblage
Table 9:	Summary of the M1 pottery fabrics from layer (936)
Table 10:	Quantification of plant macrofossils from late Bronze Age features
Table 11:	Quantification of plant macrofossils from possible middle Saxon oven and pits, PG1
Table 12:	Quantification of plant macrofossils from late Iron Age/early Roman features
Table 13:	Quantification of plant macrofossils from medieval features
Table 14:	Summary of the taxonomic identity of the charcoal
Table 15:	Summary of the charcoalified wood fragments
Table 16:	Radiocarbon determinations from selected charcoal-rich pits

Figures

Front:	Shelford Farm landfill, looking west
Fig 1:	Site location and Historic Environment Record data
Fig 2:	Ordnance Survey map, Shelford Farm, 1877
Fig 3:	Ordnance Survey map, Shelford Brick Works, 1937
Fig 4:	RAF aerial photographic image, Shelford Farm, 1947-49
Fig 5:	General plan of archaeological features
Fig 6:	Late Bronze Age features
Fig 7:	Sections through late Bronze Age features
Fig 8:	Late Iron Age/early Roman field systems
Fig 9:	Late Iron Age/early Roman boundary junction
Fig 10:	Sections through late Iron Age/early Roman features
Fig 11:	Late Iron Age/early Roman trackway
Fig 12:	Plan of possible oven and pits, PG1
Fig 13:	Sections through possible oven and pits, PG1
Fig 14:	Charcoal-rich pits scattered across the hilltop (all periods)
Fig 15:	A Saxon pit and medieval enclosure boundaries
Fig 16:	Sections through Saxon and medieval features
Fig 17:	19th-century wall foundations and other features
Fig 18:	Late Bronze Age pottery from fill (527), pit [528], 1–5
Fig 19:	Late Bronze Age pottery from fill (527), pit [528], 6–10
Fig 20:	Late Bronze Age pottery from fill (527), pit [528], 11–15
Fig 21:	Late Bronze Age pottery from fill (527), pit [528], 16–20
Fig 22:	Other late Bronze Age pottery, 21–24
Fig 23:	Late Iron Age/early Roman pottery, 25–26
Fig 24:	Medieval M1 Tyler Hill ware from layer 936, 27–32
Fig 25:	Comparison of radiocarbon determinations from selected charcoal-rich pits
Back:	Phase 3 excavation area, looking north-east

Archaeological excavations at Shelford Farm landfill site, Broad Oak Canterbury, Kent 2003–2007

Abstract

Archaeological mitigation works were undertaken from 2003–2007 at the former Shelford Farm Estate, Broad Oak, Canterbury, and in advance of the gradual phased expansion of the landfill site. Successive detailed excavations were undertaken to investigate the principal concentration of features located upon the hilltop and on the surrounding slopes.

A late Bronze Age ring ditch was located immediately adjacent to the site of a previously excavated enclosed cremation cemetery. Outside this enclosure were pits containing large quantities of pottery and other shallow pits, possibly for extracting clay, which indicated contemporary non-funerary occupation.

In the late Iron Age/early Roman period the hilltop was probably grazing land, incorporated into a field system that extended northwards. There may have been a large rectangular enclosure with a trackway orientated downslope to the south-east in the direction of a previously excavated early Roman farmstead. At its north end there was a boundary junction where small enclosures and entrances between fields provided indications of livestock management.

There appeared to be little activity in the post-Roman era, allowing for five centuries of woodland regeneration. Scattered isolated pits were dispersed across the hilltop and upon the slopes that were rich in oak charcoal derived from burning seasoned logs. Radiocarbon analysis demonstrated a range of dates spanning the 7th–12th centuries during which it is thought likely the site was occupied by managed woodland.

At least a portion of this had been cleared by the 13th–14th centuries to make way for a smallholding adjoined by several small enclosures. The former Shelford Farm has removed all evidence of medieval structures, but for which a large quantity of domestic cooking pots and storage jars were found in nearby features. Occupation ceased in the 14th century and there was no evidence for continuity with the modern farm.

1 INTRODUCTION

Northamptonshire Archaeology (now MOLA, Museum of London Archaeology) carried out a series of archaeological excavations in 2003–2007 at Shelford Farm landfill site, Broad Oak, Canterbury, Kent (Fig 1; NGR TR 1610 6070). All archaeological works took place as a condition on planning consent by Kent County Council (KCC) for various stages during the expansion of the landfill site entailing geoarchaeological evaluation, open area excavation and strip-map-sampling techniques. The work was initiated by John Samuel Archaeological Consultants (JSAC) acting on behalf of Brett Waste Management. Following changes of company ownership within both parties, the project responsibilities came to rest with CgMs Consulting acting on behalf of Viridor Waste Management.

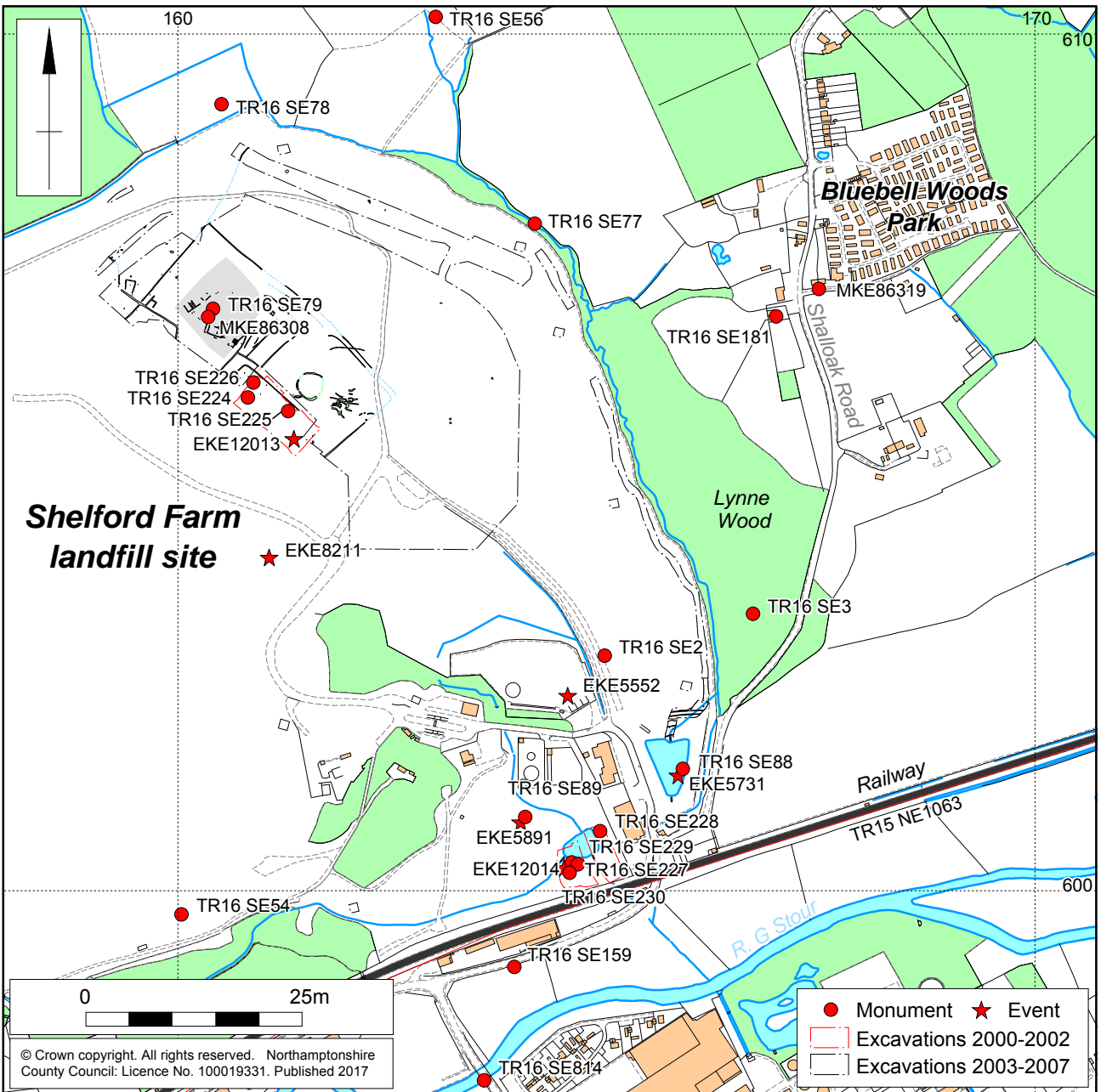
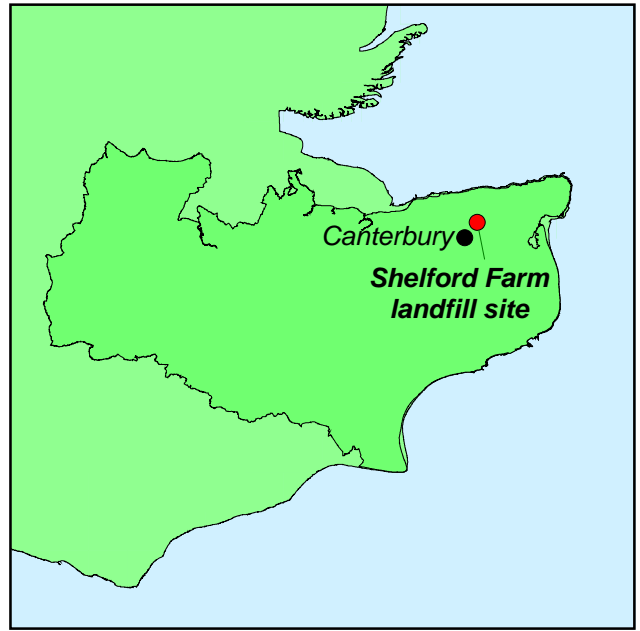
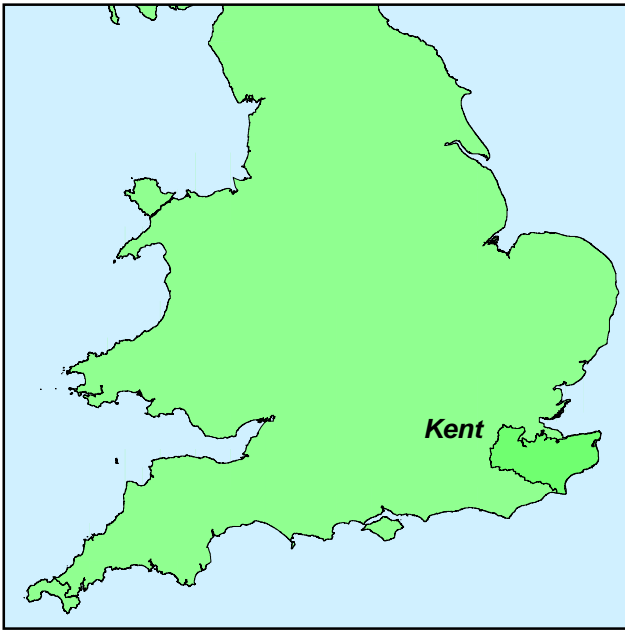
There was no brief issued for the works and there is no sole document encapsulating the whole of the archaeological requirements as a single Project Design. The scheme continued from earlier investigations undertaken by Canterbury Archaeological Trust (Rady 2002; Boden 2003; Boden and Rady 2003; Scott *et al* 2003). Each stage of work was handled as a separate small project within the overall scope of the landfill expansion and followed a mitigation strategy that was prepared by JSAC (JSAC 2002a). The archaeological requirements were agreed and monitored through continuous dialogue between the archaeological consultants and KCC at each stage.

Northamptonshire Archaeology (NA) began work in 2003, when pylon lines were relocated along the eastern edge of the site by SEEBOARD Transmission Projects. Prior to overhead cables being taken down and re-routed underground, NA conducted a strip-map-sample excavation along the entire route of the cable in accordance with a Project Design approved by KCC (Yates 2003a). A short report was produced presenting the results from this work (Jones and Yates 2004).

Further work was commissioned in 2003 for an open area excavation in advance of phase 1 of the landfill expansion, which identified a Bronze Age ring ditch and fragments of field systems of later periods (Yates 2003b). This was then followed by a geoarchaeological field evaluation to assess the potential of the Palaeolithic and Pleistocene gravel deposits (Wenban-Smith 2003). Shortly thereafter NA also undertook a strip-map-sample excavation along a c1.2km long pipeline corridor, 6m wide, for the relocation of the high pressure gas main by TRANSCO (Brown 2003).

In 2004 NA returned to the site to undertake a further open area excavation in advance of phase 2 of the landfill site expansion in pursuance of the extent of the previously identified features. There have been no interim statements for this or subsequent stages. A second set of power lines were diverted in 2005 by National Grid, this time retaining them as overhead cables and moving the pylon bases to the east (Jones and Walker 2006). Following on from this, it was then possible to undertake the open area excavation for phase 3 of the landfill expansion in 2006 and then phase 4 in 2007. The present report focuses on the landfill expansion areas and does not include previously reported utility diversions, except where they may inform the overall interpretation of the site.

Northamptonshire Archaeology (now MOLA, Museum of London Archaeology) is an organisation that is registered with the Chartered Institute for Archaeologists (CIfA). This report was prepared in accordance with the *Management of Research Projects in the Historic Environment* (EH 2006; 2008), the requirements of Kent County Council, and the appropriate national standards and guidelines, as recommended by the Chartered Institute (CIfA 2008a-d; 2010). All work was monitored by Kent County Council in consultation with JSAC and CgMs, and is compiled here as a single report for Viridor Waste Management.



Scale 1:7,500 (A4)

Site location and Historic Environment Record data Fig 1

2 ARCHAEOLOGICAL BACKGROUND

2.1 Kent Historic Environment Record

The following information was obtained from a search of the Kent Historic Environment Record, June 2013 (Fig 2). Much of this data is duplicated by the Canterbury Urban Archaeological Database, which includes the southern portion of the site, but has not been updated since the landfill mitigation works began. The search took in a radius of 1km from the centre of the excavations, NGR TR 16105 60566, where excavations were undertaken in 2002 by Canterbury Archaeological Trust. The results of the data search are presented in Table 1 and on Figure 1.

Table 1: Historic Environment Record data

Period	HER Ref	Event or monument
undated prehistoric	TR16 SE77	earthwork: bank and ditch along parish boundary
	TR16 SE89	finds: flint-tempered pottery
	TR16 SE227	finds: flint scatter, Meso-EBA
	TR16 SE56	cropmark: field system
late Bronze Age	TR16 SE3	founders hoard: spearheads, palstaves and socketed axes
	TR16 SE228	features: pits & ditches belonging to field system, late Bronze Age-EIA
Iron Age/Roman Roman	TR16 SE224	settlement: post structures, hearths, cremation burials
	TR16 SE88	building: beam slot structure, 8.9x10.5m, tiled roof & floor
	TR16 SE229	features: pits and postholes
Anglo-Saxon	TR16 SE225	feature: isolated pit
	TR16 SE2	burial: inhumation, found c1929
	TR16 SE230	features: pits
medieval	TR16 SE54	finds: shield mount, Iron spear and cruciform brooch
	TR16 SE226	feature: enclosure ditch
15th century	TR16 SE181	building: Listed Grade II, timber frame hall, C17th-18th mods
post-medieval	MKE86308	farmstead: Shelford Farm, courtyard farmstead
	MKE86319	farmstead: outfarm with dispersed plan
19th century	TR16 SE78	Ordnance Survey: fieldname 'Clamp field', kiln, 1839
	TR16 SE79	settlement: Shelford Farm, 1839-1900
20th century	TR16 SE159	military: road block, 1940
	TR15 NE814	military: road block, 1941
	TR15 NE1063	railway: Ashford-Margate, South Eastern, 1846
recent work	EKE5552	evaluation: composting site, Shelford Farm, JSAC 2000
	EKE5731	evaluation: attenuation pond, Shelford Farm, CAT 2001
	EKE12014	excavation: attenuation pond, Shelford Farm, CAT 2003a
	EKE5891	evaluation: compound, Area E, Shelford Farm, JSAC 2002c
	EKE12013	excavation: landfill, Shelford Farm, CAT 2003a
	EKE8211	geotechnical survey, Shelford Farm, CAT 2002a

Much of what is known about the area comes from recent archaeological investigations in response to planning requirements for the flood attenuation ponds and the phase 1 extension of the landfill site. Prior to this, very little was known about the area in terms of its archaeological potential.

Initial archaeological background, pre-2000

In 1941 a late Bronze Age founders hoard was recovered from between the roots of a tree in a sand quarry to the west of Shalloak Road (TR16 SE3). The hoard included

leaf-shaped spearheads, looped palstaves, looped and winged axes and socketed axes; all now held at Canterbury Museum.

To the north of the site are fairly widely distributed cropmarks, betraying the survival of features below ground that are likely to be former field systems (TR16 SE56). Whilst currently undated, such cropmarks often turn out to be prehistoric or Roman in origin.

A scatter of finds collected by metal detector in 1985 from fields to the south comprised an Anglo-Saxon shield mount, four copper-alloy buckles, an iron spear and a fragmented gilt copper-alloy florid cruciform brooch (TR16 SE54). Together the finds dated from the late 6th to the 7th centuries AD. Around c1929 an inhumation burial of Anglo-Saxon date was found beside the track leading up to Shelford Farm (TR16 SE2). The burial were armoured, but all that remained were two gilt badges in bronze and silver, now held by the British Museum.

An undated linear earthwork, forming a bank and ditch, follows the course of the Hackington parish boundary along the Broad Oak stream (TR16 SE77). The boundary is probably at least medieval in origin, but has never been investigated in detail.

An early 15th-century timber hall stands at Summer Hill, west of Shalloak Road, which has two bays and a parlour cross wing, refaced in brick in the 18th century (TR16 SE181). The building is Grade II Listed with two storeys, a tiled roof, and a central 17th-century chimney stack. The service end of the hall is missing. An outfarm and buildings was established on the opposite side of the road over the same period (MKE86319).

One of the fields to the north of the site was known as Clamp Field during the 19th century, which is thought indicate the presence of a kiln, either for brick or lime (TR16 SE78).

Shelford Farm was a loose courtyard farmstead with buildings on three side of the yard and other detached buildings nearby (MKE86308). The farm was part of Hales Place, and in 1839 it comprised a farmhouse, fodder house, stable and a range of byres (TR16 SE79). The cottages on the east side of the trackway leading up to the farm were built before this time. Local development is apparent after the Ashford to Margate line of the South Eastern Railway was built in 1846 via Canterbury, Minster and Ramsgate (TR15 NE1063). By 1872 the farmhouse and stock yard were extended with a new building against one corner and another beside the access track. The 1900 Ordnance Survey records a further rearrangement of farm buildings; with only two of the former 19th century structures surviving; a fodder house and byre. During the Second World War there were two road blocks to the south of Shelford Farm Estate; one on the Broad Oak Road outside the railway station (TR16 SE159) and one on the bridge crossing of the River Great Stour (TR16 SE814).

Recent archaeological work at Shelford Farm landfill site

The first archaeological investigations were undertaken on the sites of the composting area, attenuation ponds and Area E compound at the southern edge of Shelford Farm landfill, close to the railway (EKE5552; 5731; 12014; 5891).

The evaluation of the east attenuation pond in 2000 revealed late Iron Age and Roman boundary ditches, gullies, pits and other settlement features and finds in the vicinity of a beam slot timber structure and other possible post structures, with some evidence for masonry, tile and rubble spreads (TR16 SE88; CAT 2001). The subsequent excavations in 2001 revealed Neolithic worked flint in colluvial soils, preceding the late

Iron Age and Roman activity (CAT 2002a-b). The initial late 1st-century BC activity was dated by grog-tempered 'Belgic' pottery and comprised mainly ditches, pits, postholes and other cut features. The area was reorganised in the late 1st century AD with the construction of at least two timber and masonry buildings with substantial flint and stone foundations, together with metallated yard surfaces, which is thought to have been a farmstead. The height of its prosperity lay in the late 1st–2nd centuries AD. On the north-east side of the farmstead was a small steamhouse comprising a furnace pit, flue and hot tank attached to an apse-ended room with a smaller room to the east. Both rooms contained evidence for hypocausts, but with no evidence for a bath, the structure seems to have served as a sauna. The site was abandoned in the late 3rd century AD.

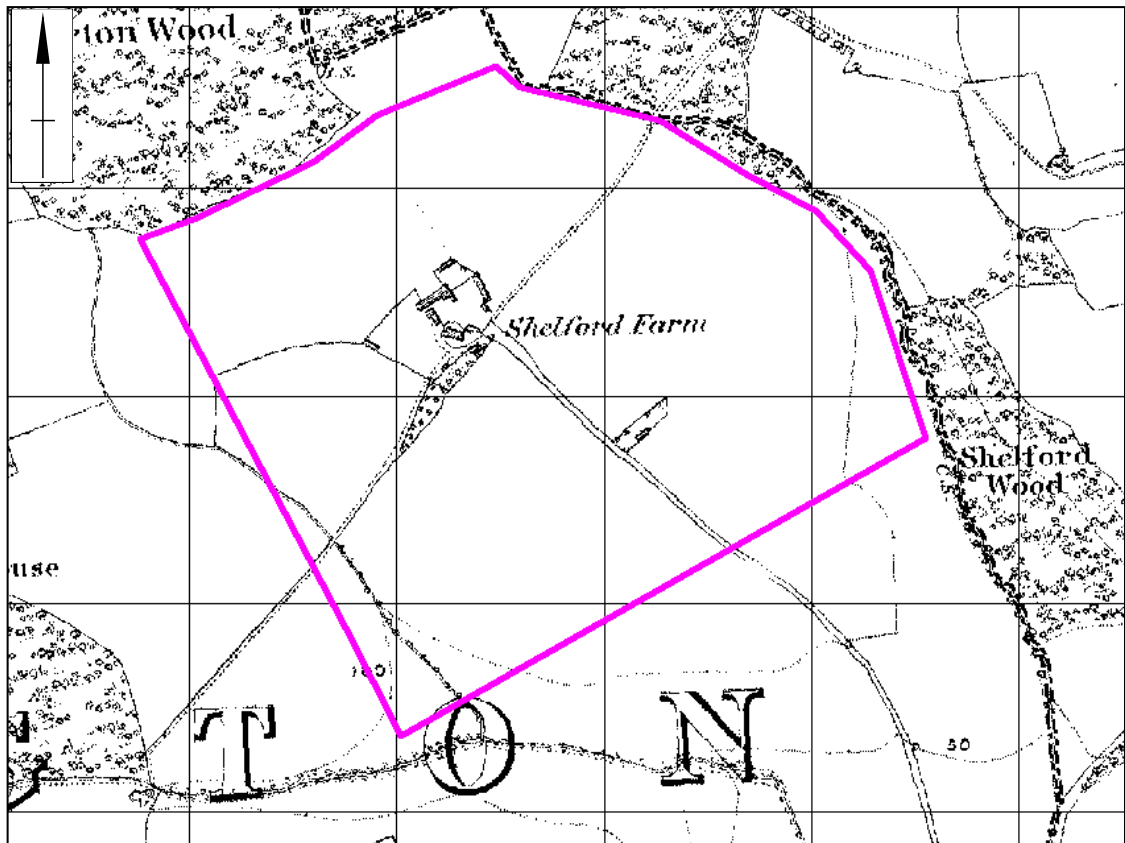
Excavations on the west attenuation pond, also in 2001, corroborated the further extent of the early worked flint scatter with finds from the Mesolithic to the early Bronze Age (TR16 SE227; CAT 2002a-b). A series of palaeo-channels indicated that the present canalised stream was predated by a long-lived natural watercourse. Late Bronze Age pits and ditches related to early field systems (TR16 SE228) and flint-tempered pottery was found nearby (TR16 SE89), but the area seems always to have been prone to flooding creating a mixture of soft brickearth, alluvium and colluvium at the base of the hill slope. Late Iron Age and Roman pits and postholes were excavated (TR16 SE229), peripheral to the farmstead found during construction of the eastern pond. A few pits containing Anglo-Saxon pottery attested to some later activity after the abandonment of the Roman farmstead (TR16 SE230).

After 2002 the extension of the landfill area came under investigation, a process that was broken up into four separate episodes, 2002–2007. The work began with the phase 1 excavation area (EKE12013). The open area excavations recorded late Bronze Age to early Iron Age settlement, c900–600BC, in the form of a roundhouse, granary post structures, stock pens, hearths and seven cremation burials, together with pits, gullies and other cut features and deposits (TR16 SE224; CAT 2003a). A single Roman pit was also excavated (TR16 SE225) together with a medieval enclosure ditch (TR16 SE226). A geotechnical survey, examining the potential for geoarchaeological palaeo-deposits (EKE8211), followed on from hand excavation of features and remains but did not indicate any earlier finds or deposits of significance.

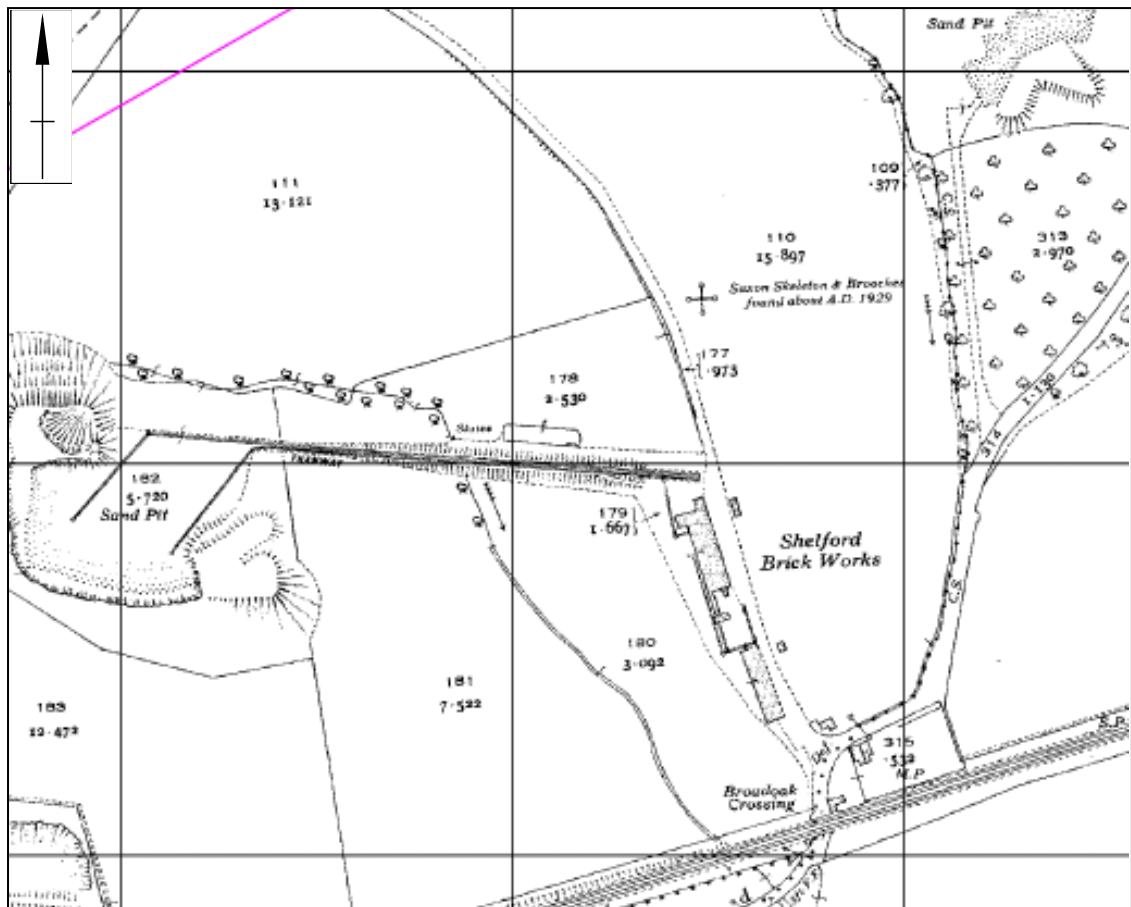
2.2 Ordnance Survey evidence

A full examination of all available Ordnance Survey (OS) maps was undertaken, taking on board historical cartographic data from 1877 to the present, and including all revisions at scales 1:10,560, 1:10,000, 1:2,500 and 1:1,250. Ordnance Survey microfilm data was also examined, together with available RAF vertical aerial photographs from 1947–1949 held with these OS data sets.

The maps depict Shelford Farm from the very first edition in 1877 onwards, tracking the varied arrangement of its buildings and nearby woodland. The cottages and their gardens along the farm access track are also depicted. The original cottages were much smaller, two narrow structures facing south-east in the middle of the enclosure, surrounded by their gardens (Fig 2). By 1937 the early cottages were replaced by the semi-detached red brick cottages that faced south-west and fronted onto the access track with their gardens to the rear. The find spot for a 'Saxon skeleton and brooches' is marked beside the access track, which heads north toward the cottages (Fig 3; TR16 SE2).



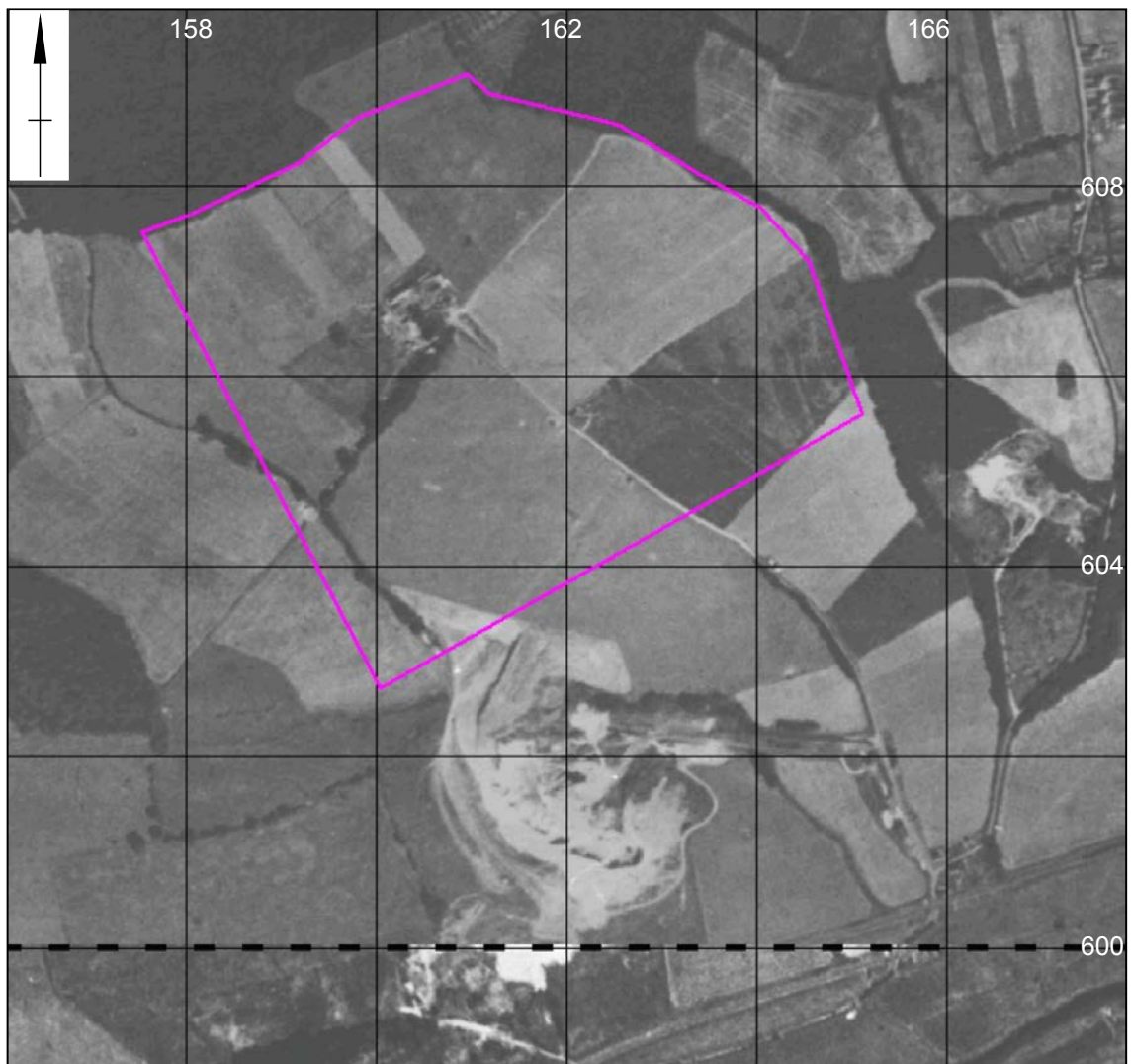
Ordnance Survey map, Shelford Farm, 1877 Fig 2



Ordnance Survey map, Shelford Brick Works, 1937 Fig 3

The same map depicts the Shelford Brick Works on the north side of the Broad Oak Railway Crossing, which is now occupied by the access to the landfill site (Fig 3). A short tramway ran between the brickworks and a sand extraction pit to the west, but was no longer mapped by 1956. The tramway ran along the entry road to the landfill site and the sand pit lay on land which is now occupied by the Viridor Waste Management site offices, welfare compound and weighbridge. The weighbridge was first mapped in 1995 and the other buildings were added later.

There is little else of historical note provided by the maps, except for the arrangement of field boundaries, trackways and footpaths, which can be compared against excavated data to identify and explain modern features. The aerial images do not show any indication of cropmarks (Fig 4). Instead, they provide a useful depiction of the arable agricultural regime in use shortly after the Second World War, together with the extent of the sand pits and brickworks that have removed archaeological remains within their perimeter.



RAF aerial photographic image, Shelford Farm, 1947-49 Fig 4

2.3 Topography and geology

The site is located 2km north-east of Canterbury City (Fig 1). The excavated areas lay upon the hilltop and upper slopes overlooking the floodplain of the River Great Stour to the south and were adjacent to land previously used for quarrying and landfill operations. Shelford farm occupied the plateau of the hilltop at c50m above Ordnance Datum (aOD) on a spur of the valley side. The farm enclosures lay on gently sloping land immediately south-east of the farm, alongside its access track, at 40–50m aOD. The land fell away steeply from 40m aOD to the south-west into a tributary valley, now occupied by landfill and to the east where another stream flows around the base of slope at c20–25m aOD.

The solid geology is predominantly London Clay with outcrops of Oldhaven and Woolwich beds on the middle slopes of the valley. Pleistocene deposits of Head Gravels are known to the north-west, south-east and south-west of Shelford Farm, and are bounded to the north-west by a ridge of London Clay. The London Clay observed during excavation was capped by shallow gravelly soil considered to be the remnant of older Head gravels. The south and west of the site also has isolated patches of Third Terrace River Gravel and extensive deposits of brickearth, with alluvium from the River Great Stour close to the southern site boundary. Previous fieldwork by Canterbury Archaeological Trust has also demonstrated that the south of the site contains colluvium sealing archaeological features.

3 EXCAVATION STRATEGY

3.1 Objectives

The objectives of the fieldwork remained consistent throughout as follows:

- Ensure the preservation of all archaeological remains through record by undertaking hand excavation of any features exposed during the strip of topsoil and subsoil deposits;
- Determine the depth of burial, character, date, extent and state of preservation of any archaeological remains, which might contribute to the understanding of the occupation and environmental history of the Stour Valley and relate such remains to the sites previously excavated at Shelford Farm;
- Determine the presence and nature of any Palaeolithic remains, assess the character of the sediments associated with them and determine the presence and potential of palaeoenvironmental and palaeoeconomic indicators;
- Determine whether late Bronze Age and/or early Iron Age settlement extended into the development area, with particular attention to funerary activity;
- Establish the presence or absence of any Anglo-Saxon settlement remains and their extent, also with particular attention to funerary activity;
- Inform mitigation strategies for the continued extension of the landfill site and feed information back into the mitigation scheme as the archaeological works proceeded.

In the event of substantial archaeological remains being encountered, further objectives were defined by the project design, by no means exhaustive, but covering

the needs and requirements for a more detailed research programme as required (JSAC 2002b).

Since this work was undertaken efforts have been made to bring together a regional research agenda for the south-east. *The South East Research Framework (SERF)* is a work in progress between the Essex, Surrey, Sussex and Kent County Councils with draft documents that so far have focused upon the Palaeolithic, medieval period, defensive features and urban landscapes. In so far as it is possible, the report addresses regional research objectives and their common themes (EH 1997).

3.2 Methodology

The open area excavations and strip-map-sample areas were conducted as the ground became available for investigation, prior to development (Fig 1). The total area subject to archaeological works, including all associated enabling works and utility diversions was c10ha.

Each of the archaeological areas was plotted and marked out with coloured pegs by the clients' contracted surveyors using their own survey grade GPS system. The open area excavations were planned to scale 1:100 or 1:50 by hand on a local grid and set against the Ordnance Survey base map using a combination of the NA survey grade GPS (Leica System 1200) and digitised hand-drawn permatrace sheets.

Topsoil and subsoil deposits were removed to the surface of the significant archaeological level using tracked 360° mechanical excavators, fitted with toothless ditching buckets and operating under archaeological direction. Excavation proceeded to the surface of the significant archaeological horizon or, where this was absent, the natural substrate. Spoil was initially stacked separately adjacent to the excavation and was later removed using dump trucks. Movement of machinery during site preparation was conducted in such a manner as to avoid impact on the archaeology.

Each excavation area was cleaned sufficiently to enable the identification and definition of archaeological features. All archaeological deposits and artefacts encountered during excavation were fully recorded. The recording followed the standard NA context recording system with context record sheets using unique numbers drawn from a central register for each feature or deposit, cross-referenced to scale plans, section drawings and photographs in digital, and both 35mm monochrome and colour film (NA 2011). Deposits were described on *pro-forma* record sheets to include measured and descriptive details of the context, its relationships, interpretation and a checklist of associated finds. Archaeological sections of sampled features were drawn at scale 1:10 or 1:20, as appropriate, and all levels were related to Ordnance Survey datum. Spot heights were measured in across the site.

Representative samples of all exposed archaeological features were excavated using sections of 1.0–3.0m length and allowing them to weather to expose smaller variations within them. All structural features were fully excavated, pits were 50% excavated and a representative portion of all linear boundaries was excavated. Greater sampling was undertaken where features contained deposits or artefacts of particular value or were likely to hold significant artefact or environmental assemblages. Unusual or burnt features were 100% excavated and samples recovered for environmental processing. Intersections were investigated to establish stratigraphic relationships and sections of linear and curvilinear features were also excavated away from these to obtain unmixed samples of material. Features such as furrows or tree throws were investigated to characterise their form and function.

Bulk soil samples were collected for archaeobotanical remains from principal contexts and from all burnt deposits in accordance with recommended guidelines (EH 2011). Sample sizes were 40 litres or the entire context for smaller deposits. Soil was stored in sealable buckets from securely stratified deposits considered to have the minimal risk of contamination. Bulk soil for archaeobotanical remains were processed at NA by specialist staff using the flotation technique to retrieve seed, charcoal and other remains. The resultant residues were hand sorted to retrieve bones and other finds.

Artefacts were collected by hand and from sieved samples. Spoil and the surface of archaeological features were scanned with a metal detector to ensure maximum finds retrieval. The field data was compiled into a site archive with appropriate cross-referencing in accordance with best practise (ClfA 2008d; MGC 1992) and the finds were prepared for long term storage in a stable environment (Walker 1990; Watkinson and Neal 1998).

4 THE EXCAVATED EVIDENCE

The natural substrate upon the upper slopes and ridges of the site comprised yellow-orange sandy clay and gravel (Head gravel), interspersed with fissures through which London Clay had risen. The archaeological and surface deposits were distributed above this geological horizon, with principal features cut into the clay and gravel. The substrate was overlain by up to 0.20m of light to mid orange-brown sandy clay subsoil and up to 0.35m of mid to dark orange-brown sandy clay loam topsoil. Few finds were retrieved during machine excavation, spoil heaps were scanned by metal detector during the strip and it would seem that the general scatter of finds was at a normal distribution with no strong indications for activity in any particular period.

4.1 Summary of the site chronology

The overall pattern of land use exhibited through artefactual and cut features is broken and disjointed. There are five separate periods that were visible within the archaeological record, with little or no evidence to demonstrate continuity for the periods between. The hilltop was utilised on several occasions with diverse functions including funerary rites, agriculture and domestic settlement. Although earthworks from earlier periods may have been visible later on, influencing orientations and distribution, only the medieval paddocks had demonstrable continuity with the post-medieval.

Table 2: Site chronology

Period	Nature of activity
Late Bronze Age (1,000–750BC)	ring ditch, clay extraction pits and boundaries upon the hilltop cremation cemetery and post structures found adjacent in 2000-2
Late Iron Age/early Roman (1st–2nd centuries AD)	field systems, small enclosures and trackway ditches
Saxon, Norman and early medieval (7th–12th centuries AD)	scattered isolated pits, rich in oak charcoal
Medieval (13th–late 14th centuries AD)	fragmentary remains of ditches forming a small group of paddocks, reused in the 19th century
post-medieval (mid 16th–19th centuries AD)	Shelford Farm buildings, cottages, associated field boundaries and drainage ditches

4.2 A late Bronze Age ring ditch, boundaries, pits and gullies

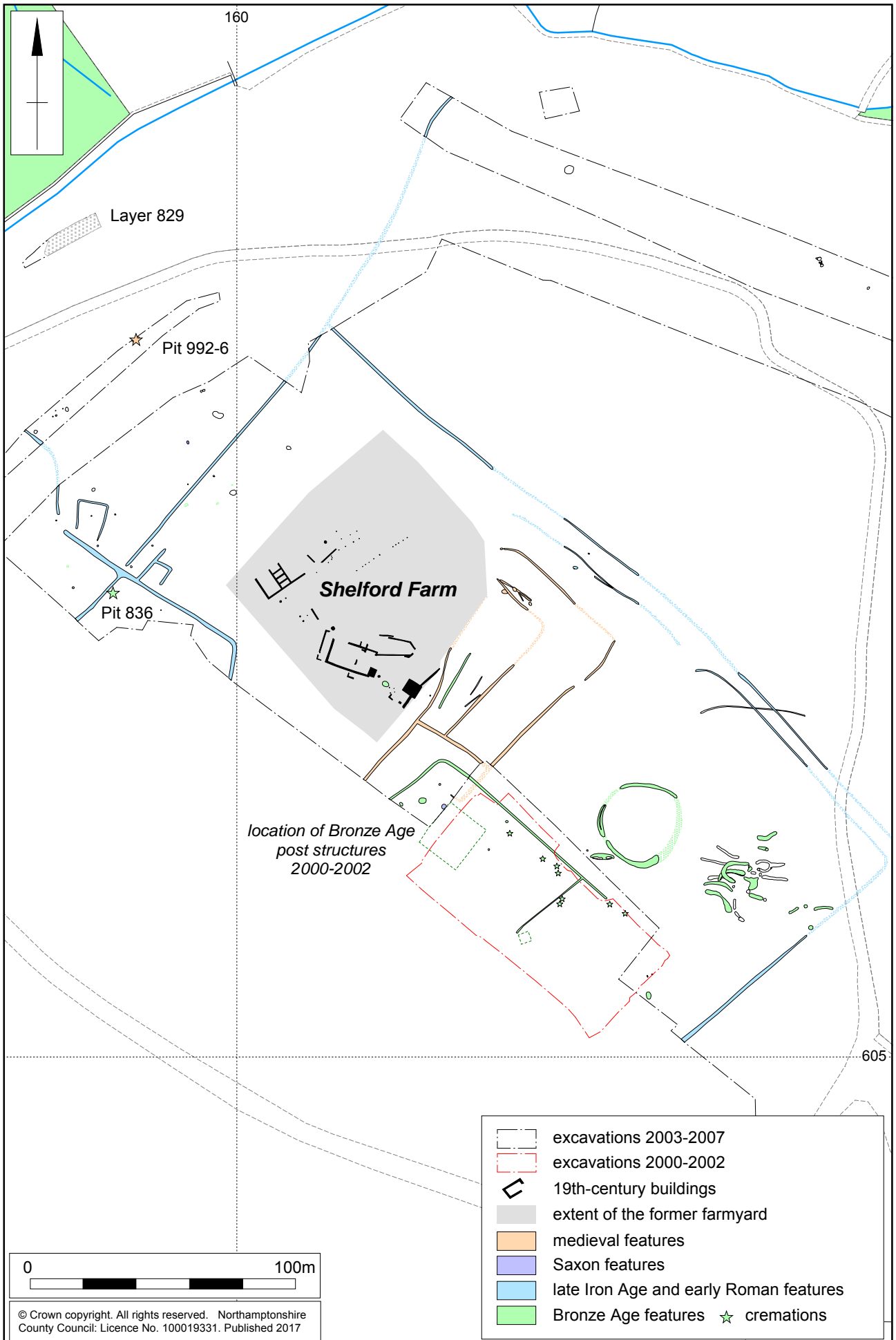
A ring ditch was exposed in the area strip immediately adjacent to the site of the 2002 excavations (Figs 5–6). This feature was sub-circular with an internal diameter of 27.5–29.8m and lay upon fairly flat ground at the crest of the hill slope. The land fell away gradually to the north and more rapidly to the east and south-east, towards the stream. On its south-east side were scattered pits and partial curving gullies where the slope began to drop away. To the west, on level ground, lay the enclosure that was investigated in 2002 and which had contained post structures, cremation burials and scattered pits (CAT 2002b). Outlying pits were also found to the north-west and south. The features were themselves in very poor condition and provided little information for their origin and development. The artefactual evidence for this period, however, and most particularly the pottery, was both abundant and fairly well preserved. There were a total of 1,046 sherds (over 13kg) of pottery across the site, estimated at 453 vessels, and most of the 17kg of fired clay is also probably contemporary. Bone preservation was, on the other hand, non-existent and the quality/quantities of charcoal and plant-macro remains are extremely variable.

The ring ditch

There were two cuts that formed the ring ditch on roughly the same circuit, deviating from the course by little more than half a meter, so that the surface soilmark appeared wider at some points than at others. Both the original ditch cut and its recut were proportional to each other and were in the range of 0.65–1.40m wide by up to 0.40m deep. The ditch was badly truncated, particularly on its east side, and the full circuit could not be traced. The profile of the ditch varied considerably owing to the truncation and the better preserved sections indicated that the profile had fairly gently sloped sides that curved gradually into a narrow rounded base (Fig 7, S.93). The earlier cut, [683], was filled by loose mottled dark brown and orange sandy silt with frequent pebbles <80mm in size, Iron salts and a few charcoal flecks. The later recut, [681], contained similar material and the boundaries were indistinct at best. Two ditch terminals lay on the south-west side marking a brief break in the circuit that was 1.7m wide, evidence for entrances elsewhere were absent owing to the degree of truncation and it is not certain whether the ditch was intended to be a full or partial circuit. There were no features observed within the perimeter of the ring ditch, as postholes and gullies would presumably not have survived later truncation. A total of 69 sherds (616g) of late Bronze Age pottery were recovered from within the fills of three sections. Other finds such as animal bone did not survive and although soil samples were taken, these were completely sterile.

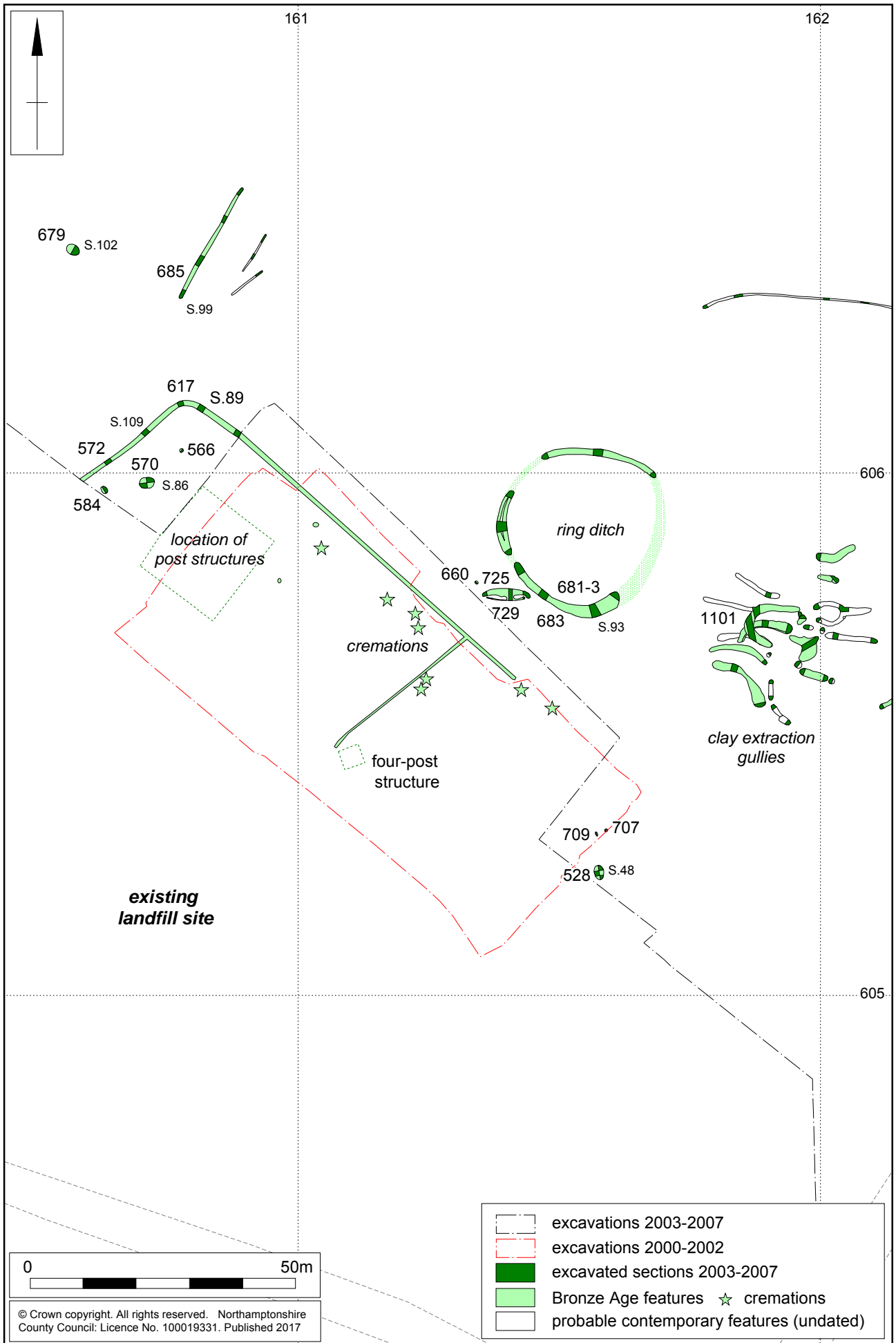
Gullies outside the ring ditch

Two gullies lay south-west of the ring ditch; both had become heavily obscured by the material spread over and above them. The gullies were 1.2m apart, aligned east–west, 9.0m long, with the ends curving towards each other and lay south of the ring ditch entrance, off-set by 4.5m. The northern gully, [725], was 0.8m wide by 0.12m deep, whilst the southern gully, [729], was less substantial, 0.61m wide by 0.09m deep at its east end and almost absent at the west end. The profiles of both gullies were almost imperceptible, forming little more than shallow rounded troughs. The fill throughout was generally of firm mid brown to dark grey-brown sandy clay with moderate pebble flint <55mm in size and charcoal flecks, mainly towards the base. Gully [725] contained nine sherds (50g) of late Bronze Age pottery, there was also a small quantity of fired clay. The gullies may have been the equivalent of beam slots, perhaps for wattle panels or for a lean-to wooden A-frame. In either case there were no post supports and its function remains elusive.



Scale 1:2,000 (A4)

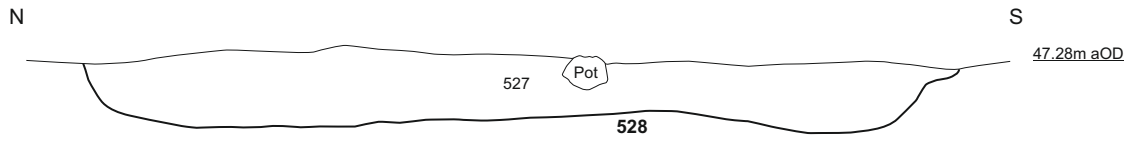
General plan of archaeological features Fig 5



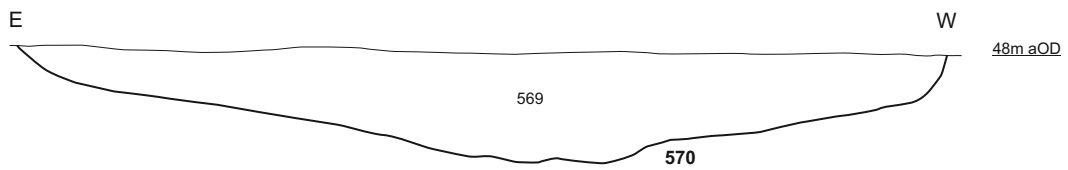
Scale 1:1,000 (A4)

Late Bronze Age features Fig 6

Section 48



Section 86



Section 93



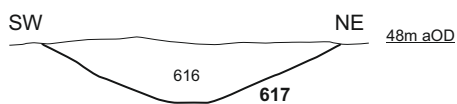
Section 109



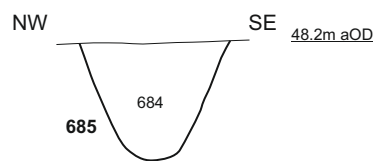
Section 102



Section 89



Section 99



Boundaries

The principal enclosure, found within the 2002 excavations, extended into the area that was examined in 2003. This boundary ditch formed a corner where it changed from a north-west to south-east alignment through 90° to a south-west to north-east alignment. Ditch [617] was 1.4m wide by 0.4m deep, which remained fairly consistent along its course (Fig 7, S.89, S.109). The sides had a straight angled 30-40° gradient with a narrow flat base. The fill was firm mottled mid grey-orange silty clay with moderate pebble flint <40mm in size. There were 18 sherds (118g) of late Bronze Age pottery from four of the sections. The fragments of gullies to the north suggested that other boundaries of contemporary date may have existed prior to modern ploughing (Fig 6). In most instances very little remained of these to a depth of 100mm, the date of which could not be confirmed by finds. However, ditch [685] had a straight-sided U-shaped cut that was 0.51m wide by 0.38m deep at its south-west terminal (Fig 7, S.99). The fill comprised firm mottled light mid grey and orange-yellow silty clay with few charcoal flecks. The terminal produced six sherds (162g) of thick-walled pottery with vertical combing, typical of Deverel-Rimbury style decoration.

Pits and gullies

Late Bronze Age pits were focused in the vicinity of the ring ditch and cremation cemetery (Figs 5–6); three pits lay within the perimeter of boundary ditch [617], three pits lay to the south of the ring ditch, pit [660] lay outside the entrance to the ring ditch, there was an isolated pit to the north-west and a large concentration of pits and partial curving gullies lay south-east of the ring ditch.

Isolated pits

Pit [679] was large and oval, with the long axis aligned north-west to south-east, it was 2.4m long by 1.8m wide by 0.42m deep (Fig 7, S.102). The pit had gently sloping, slightly curved sides, which formed a rounded bowl. The fill comprised soft mid grey clayey silt with frequent orange-brown mottling, moderate coarse pebbles, occasional charcoal flecks and slight root disturbance. The pit produced 102 sherds (926g) of late Bronze Age pottery, whilst soil samples revealed only small quantities of charcoal. Other features nearby had probably been destroyed by the 19th-century farm and its outbuildings.

Those pits within the perimeter of the enclosure, south of ditch [617], were each slightly different. The largest of these was pit [570], an oval feature that was 3.1m long by 2.3m wide and 0.35m deep. The pit had gently sloping sides that merged gradually into a slightly uneven flattish base (Fig 7, S.86). The fill comprised firmly compacted mid grey-orange mottled clayey silt with moderate pebble flint inclusions. There were 38 sherds (232g) of late Bronze Age pottery, accompanied by worked flint flakes, including two which were reutilised as scrapers.

The other two pits near pit [570] were much smaller in size. Pit [566] was circular, 0.86m wide by 0.17m deep, filled by mottled firm mid grey and orange-brown sandy silty clay. The sides curved swiftly into a well-formed rounded bowl. The pit produced four sherds (16g) of pottery forming parts of a late Bronze Age jar. Pit [584] was oval, 1.5m long by 1.3m wide by 0.28m deep, and filled by two layers of material. The basal fill comprised mottled firm mid brown-orange silty clay with charcoal flecks and pebble flint inclusions, 90mm thick. Above this was compact light blue-grey clay with occasional brown-orange mottling, speckled with charcoal flecks, 190mm thick. The upper fill produced 44 sherds (108g) of pottery, the majority of which were from a flint-gritted jar, but also included sherds from a burnished bipartite bowl. Both pits

were sampled for seeds, producing sparse evidence for wheat. Pit [584] also exhibited grass and brome seeds alongside small amounts of charcoal.

Two of the pits to the south of the ring ditch were relatively small. Pits [707] and [709] lay together as a pair and were of equivalent size, no greater than 0.60m wide by 0.24m deep. Pit [707] was circular, whilst pit [709] was slightly elongated. Pit [709] had fairly steep sides that curved into a rounded base, whilst pit [707] was much more bowl-like in appearance. There were no finds from pit [709], however, its counterpart produced 149 sherds (802g) of late Bronze Age pottery that were derived from several vessels including both bowl and jar forms, one of which exhibited fingernail decoration.

A third pit nearby, pit [528], was much larger than these and was oval in shape. The pit was 2.9m long along its north-west to south-east axis, 1.45m wide and 0.25m deep (Fig 7, S.48). The sides were fairly steep, and it had a broad flattish base, similar to a fire pit or oven base, however there was no sign of scorching of the natural sand and gravel into which it were cut. The fill comprised mainly friable brown sandy loam with frequent hard patches of burnt clay throughout, most of which was bright orange, but also with a few yellow and black pieces. A near-complete pot was recovered in section, together with a mass of other pottery that comprised 500 sherds (9.5kg) from a large number of vessels, most of which were bipartite jars including burnished, fingernail decorated, comb decorated and scorched sherds. Soil samples were highly productive with a dense concentration of barley and wheat grains, accompanied by plentiful charcoal. This feature may have been a hearth, but the large quantity of pottery recovered was unusual and suggests that their deposition marked a specific event such as disposal of old storage jars or remnants of poorly fired vessels. There was insufficient evidence to suggest this was a clamp kiln, but its proximity to clay extraction pits suggests that the raw material was in use nearby.

Outside the south-west entrance of the ring ditch was a discrete circular pit, [660]. The pit was 0.6m wide by 0.15m deep, filled by loose dark grey-orange silty clay with occasional pebble flint that was devoid of finds.

An isolated pit, [836], lay to the north-west that was relatively small, circular and bowl-like, 0.31m in diameter and 0.31m deep (Fig 5). The fill comprised hard dark brown-black silty loam containing frequent burnt flint pieces <60mm in size, and was stained throughout with charcoal. The pit contained 11 sherds (76g) of flint-tempered pottery, including a hooked rim sherd and was the only example to contain datable artefacts.

Clay extraction pits and gullies

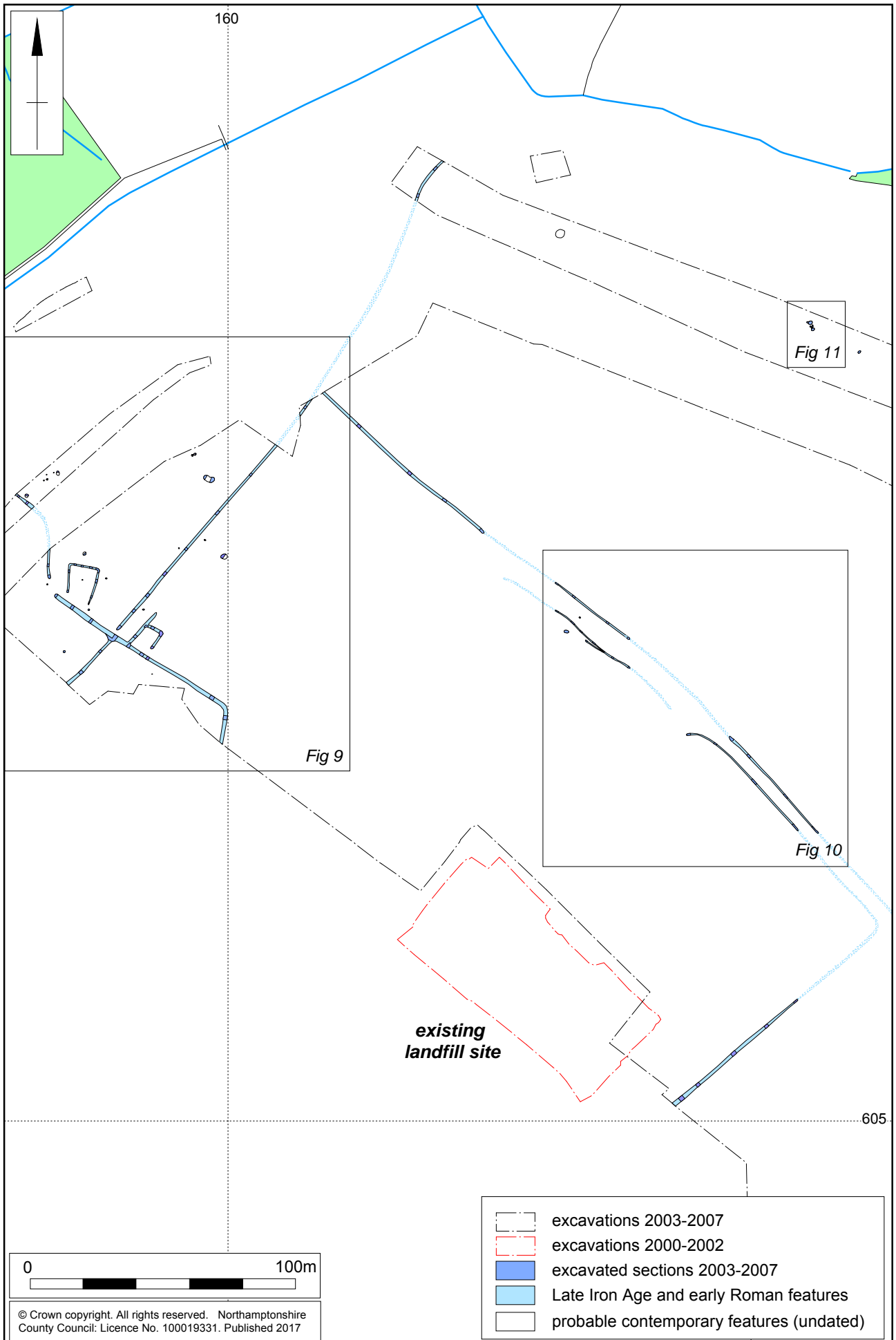
To the south-east of the ring ditch, where the natural hill slope began to fall away, was the largest and most enigmatic of the feature groups (Fig 6). This fairly dense concentration of pits and short curving gullies had no particular overall pattern or form. The pits were all large enough that they could not have been structural elements and no postholes were evident amongst the features. Similarly the gullies were deep enough to be significant, but had little about them to indicate purpose or function. Several of the gullies cut or recut earlier features within the group, such that the group as a whole could not have been contemporary and must have developed sequentially. The only possible trend in alignment lay on an east–west orientation, downslope. Coincidentally this seems to have followed the pattern of the clay bands running through the sand and gravel substrate. The possibility is that the feature group had no organised form or distribution because it was instead dictated by the geology and the clay was extracted along shallow seams beneath the soil.

The majority of the features were in the range of 0.15–0.22m deep, but in some instances extraction gullies or individual pits were up to 0.44m deep. The base of most of these features was natural blue-brown clay, whilst the sides were often sand or gravel. Geoarchaeological test trenches demonstrated that the gravel was several meters deep and the weight of gravel pushing down upon soft wet clay had forced it to the surface in seams. Features tended to be cut with a fairly sharp steep sloping edge with a rapid break of slope towards a flat or rounded base. The fill materials were generally consistent across the feature group, comprising firm grey-orange and brown sandy clay with moderate to frequent sub-angular pebble flint <30mm in size. A few exhibited manganese or iron pan, redeposited from the surrounding gravel, but for the most part the mottled fills that were observed in late Bronze Age ditches and pits was absent suggesting that they were subjected to less post-depositional water action within the soil, perhaps the product of being on the upper part of the hill slope and therefore draining more quickly. It seems reasonable, given the lower quantities of pottery, that such features were quickly backfilled with the up-cast from the neighbouring clay pits rather than domestic material that may have accumulated elsewhere through periodic dumps, placed deposits and casual losses. The features produced a total of 34 sherds (365g) of late Bronze Age pottery and a flint scraper between 11 contexts, none of which appeared to be particularly remarkable.

The surface of these features was slightly disturbed. An intrusive piece of 1st to 2nd-century AD blue-green Roman vessel glass was recovered, together with one sherd (8g) of pottery dating to cAD1250–1325 and a fragment of medieval tile. Given the shallow nature of most features it is likely that modern ploughing had dragged material from elsewhere, depositing them close to the surface of the features and allowing their incorporation within the top of these fills.

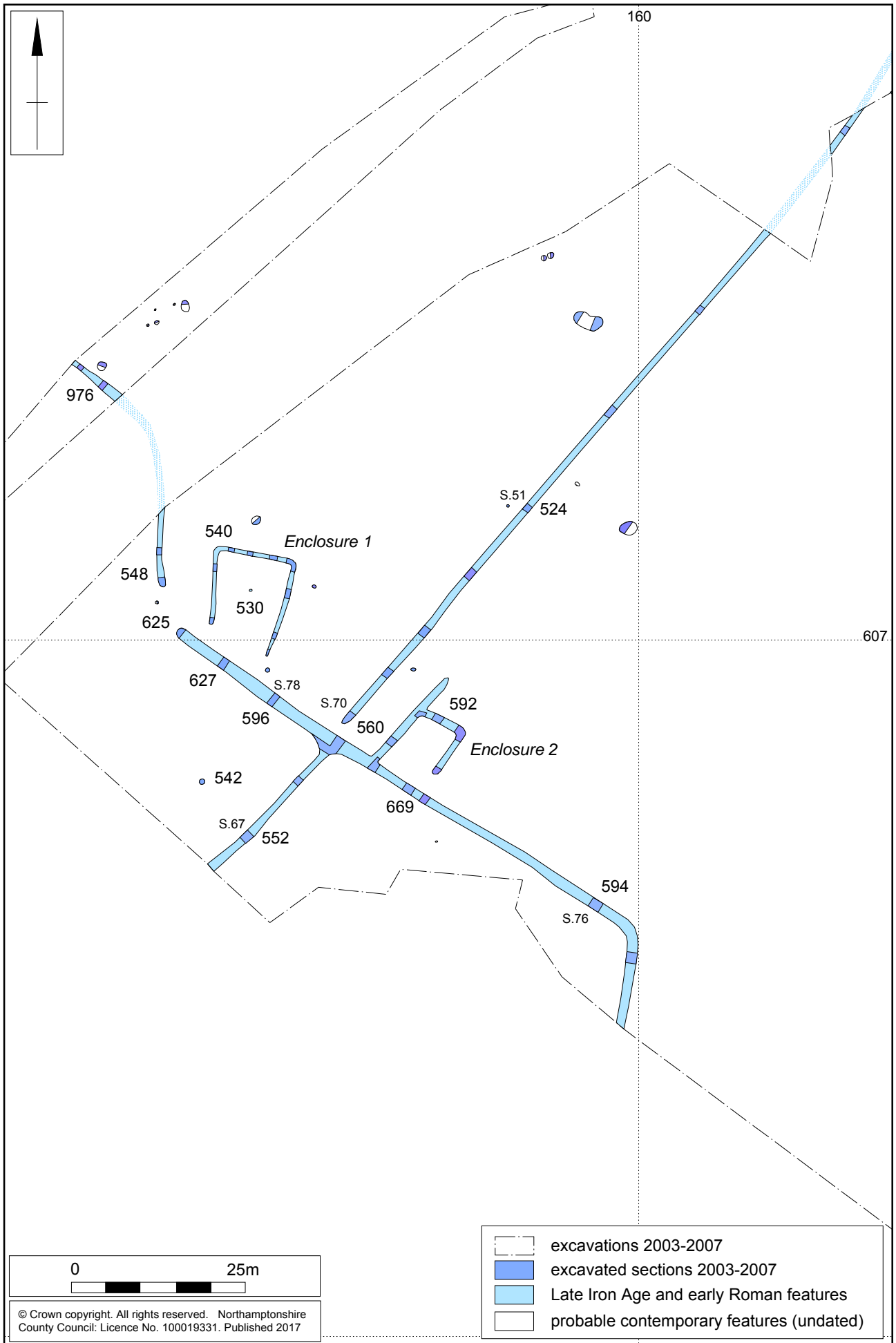
4.3 Late Iron Age/early Roman field system

Boundary ditches and some contemporary pits were identified at a major junction between four large open enclosures (Fig 8). The layout at this junction shows that there were also two smaller pens at the corner of these enclosures (Fig 9). The boundaries were identified over a wide area, comprising a fragmentary survival of truncated ditches and gullies, but with enough elements to reconstruct a roughly rectangular enclosure across the excavated area. The longest side of the enclosure was aligned north-east to south-west, 288m long, and its shortest side was 121m wide. Two parallel gullies along its north-east boundary formed a trackway (Fig 11). The artefactual assemblage is small and befitting of an area located away from the main focus of habitation. There are 204 sherds (1,366g) of pottery, estimated at 59 vessels. There was, however, some indication that a building may have been located nearby as the character of the artefacts does not fit with the usual utilitarian forms found dispersed at the edges of fields. The four examples of 1st-century AD pedestal jars are often considered as high status items and it is rare to find vessel glass in ditches peripheral to habitation. There were also 11 tile fragments, including two pieces of *tegulae*, although since they are from modern levelling they could have travelled some distance from their point of use. The charred plant macrofossil remains were uninspiring, comprising an abundance of charcoal with few seed grains. Animal bone did not survive within the site.



Scale 1:2,000 (A4)

Late Iron Age/early Roman field systems Fig 8



Scale 1:750 (A4)

Late Iron Age/early Roman boundary junction Fig 9

The main boundaries

The principal boundary ditches at this location divide four larger areas, which were probably large open areas for grazing (Fig 9). None of these boundaries were particularly productive in terms of finds and were the only recognisable concentration of features for the period. Plant macrofossil remains were largely limited to wood charcoal, although there were a few charred cereal grains from ditch [669]. Soil samples along the main ditches indicated there was no evidence for crop processing, and an arable use for these fields seems unlikely.

The two ditches that formed the straight axial boundary orientated from south-west to north-east were investigated at 11 points, including the intersection with the adjoining boundary. The only section to produce any pottery was at the terminal of the north-eastern ditch, [560], comprising two residual late Bronze Age sherds (6g). The terminal was 1.6m wide by 0.33m deep; it had gently sloping sides with a slight drop at to a narrow rounded base (Fig 10, S.70). The gap between the terminal and the boundary junction was 2.0m, barely wide enough for use as an entrance unless its purpose was to constrict movement, as might be needed when moving livestock between fields. Further along the same ditch, [524], this boundary showed signs of increasing truncation, narrowing to 0.92m wide and 0.24m deep, although the profile had become much more truncated (Fig 10, S.51). Along the south-west extent of the same axial boundary, [552], it was also badly truncated at 0.60m wide by 0.16m deep, with little more than a shallow U-shaped profile remaining (Fig 10, S.67). The fill was largely undifferentiated firm brown-grey silty clay with occasional pebble flint, entirely comprised of natural accumulations eroded from the ditch sides.

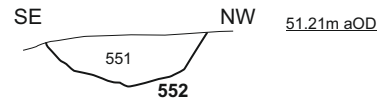
The junction between the two principal boundaries showed no clear distinction between the features, it is likely that both were contemporary and filled gradually over the same period. The boundary, orientated north-west to south-east, followed a meandering route; it entered the excavation area from the south, turned to the northwest, passed the main junction with ditch [552] and reached a terminal at ditch [625] before resuming its course to the north from ditch terminal [548] — a break of 6.3m — and extended beyond the excavation area. Possibly the same ditch was identified again in the neighbouring trench aligned north-west to south-east, ditch [976]. This slightly irregular course suggests that the field systems were probably not all laid out in a regular pattern and it is coincidental that the form visible on Figure 8 is generally rectangular.

The north-west to south-east boundary ditch became more substantial around its junction indicating a higher level of preservation. Ditch [596] was 1.7m wide by 0.80m deep, the sides were near vertical and it had a sudden step sloping down into a broad rounded base (Fig 10, S.78). To the north and south the ditch had the same rounded base, but being shallower, it is clear the sharp steep sloping sides were lost to ploughing (Fig 10, S.76). The fill was comparable to the other contemporary axial boundary, firm brown-grey rusty mottled orange silty clay, with more frequent pebble flint of small size. Late Iron Age/early Roman pottery was sparse; 12 sherds (90g) from ditch [594] and 12 sherds (118g) from ditch [596]. There were no finds from the terminals either side of the 6.3m wide entranceway between the northern and western fields. This tends to suggest that it was not associated with a boundary of great significance or with settlement.

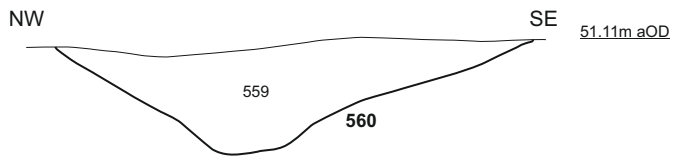
Section 51



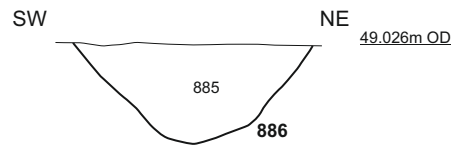
Section 67



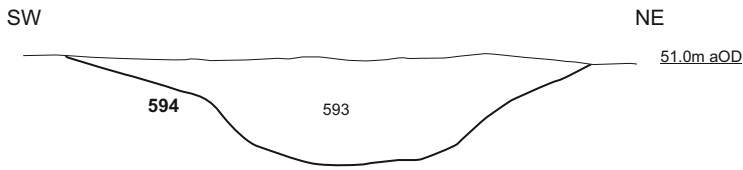
Section 70



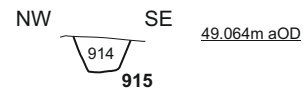
Section 190



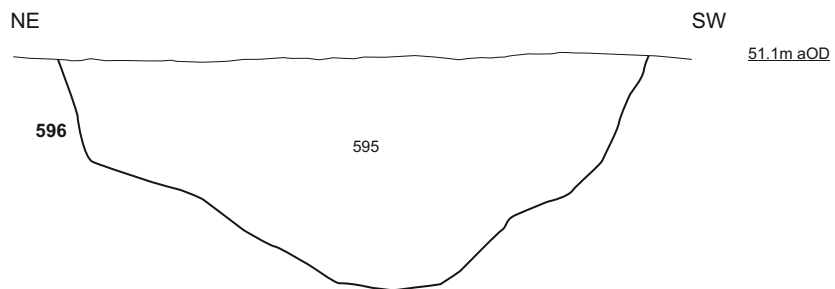
Section 76



Section 202



Section 78



Boundary ditches over the wider area

The other ditches across the site were not closely datable and in many cases ditch fragments were assigned to period on the basis of their position and orientation with other features elsewhere (Fig 8). Below is an attempt to provide an overall view of the layout of surviving field systems. Typically where fragmentary boundary ditches and trackway gullies were found, the datable finds from them were nearly always sparse (Fig 11).

Two smaller enclosures

Two small enclosures located either side of the boundary junction probably served a function associated with pastoral farming and coraling or controlling movement of livestock at the entrances between fields. Neither enclosure contained significant quantities of finds, with as many finds from the scattered pits in the vicinity.

Enclosure 1

This enclosure was sub-rectangular, roughly 11.0m by 10.5m, bounded on three sides by ditch [540] and on the southern side by one of the main field boundaries, ditch [627] (Fig 9). Ditch [540] was not particularly substantial; 0.55m wide by 0.16m deep. Taking into account its truncation it would probably have acted as a drain around a fenced area rather than being a physical boundary of any substance itself. The short gaps on the north-west and south-east sides of the enclosure, between its perimeter ditch and the main boundary, were 2.5–3.4m wide, and could easily be closed off by a gate. Its fill comprised firm brown-grey silty clay, a natural accumulation similar to the main boundaries. There were 17 sherds (214g) of late Iron Age to early Roman grog-tempered pottery from two of the eight hand-dug sections through the ditch. Soil samples from the southern boundary provided nothing of significance.

A single isolated circular pit, [530], lay in the centre of the enclosure that was 0.5m in diameter, but little more than 80mm deep, filled by dark grey-black silty clay. The pit produced 11 pottery sherds (72g) in the same grog-tempered fabric recovered from the surrounding ditch. A moderate quantity of charred barley grains and an abundance of wood charcoal came from the same fill.

Enclosure 2

The shape of this enclosure, sub-rectangular in plan, was designed to form a part of the boundary system. The perimeter ditch attached to the principal field boundary, forming one of its sides (Fig 9). The north corner had a short spur extending parallel to boundary ditch [560], which delineated a short 5.5m wide trackway between the narrow opening at the corner of the field and its open expanse. The enclosure was 9.8m by 6.2m, and its southern entrance was 2.8m across, which would have been easily closed off by a gate. There were no internal features within the enclosure. The perimeter ditch, [592], was 1.34m wide by 0.24m deep, which formed a broad shallow rounded trough filled with mid grey sandy silt, with occasional patches of pale yellow sand washed in from the sides. Grog-tempered pottery was retrieved from the north-east side of the enclosure, comprising 21 sherds (478g). Bulk soil samples from both the main boundary on its south-west side and the north-east perimeter ditch produced few charred plant remains.

Scattered isolated pits

There were c13 undated pits scattered around the vicinity of the boundary junction and one that is dated by pottery, pit [542] (Fig 9). There is little that was obviously significant about the undated pits, even when completely excavated. They are grouped

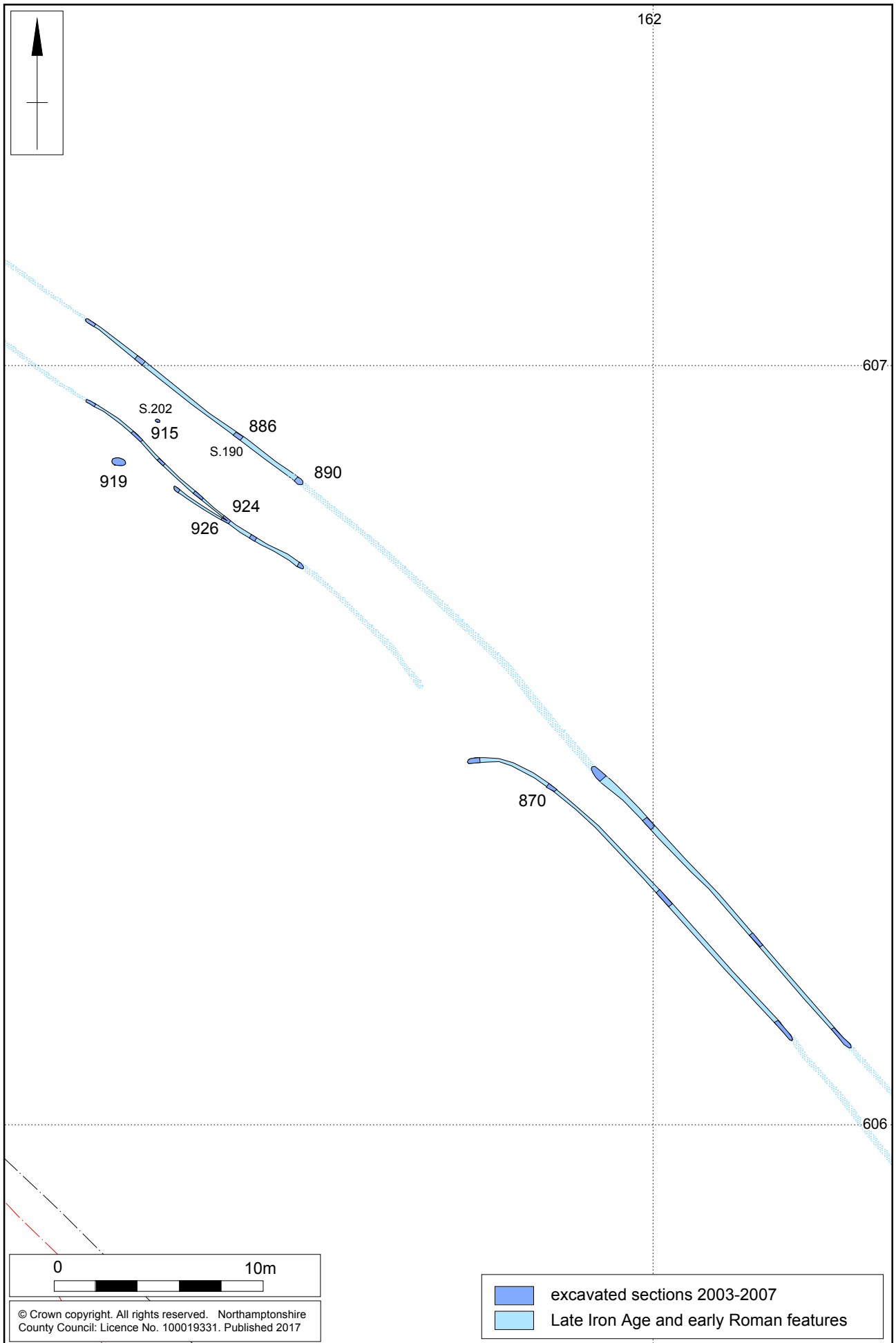
in this period because of their proximity to datable landscape features and because they do not fit the character of other nearby charcoal-rich pits. The variety in shapes and form were considerable, each pit having its own unique character. The fills were varied but the distribution provides no real meaning to their origin. In some cases they may have been tree hollows with generally little in common with pits of clear archaeological origin.

Pit [542] was located on the west side of the boundary junction within the corner created by the two main ditches. The pit was fairly circular, 0.55m across, but a mere 70mm deep and filled by dark grey-brown silty clay with frequent charcoal flecks. There were four sherds (64g) of pottery, both grog- and flint-tempered varieties, but it was otherwise unremarkable.

A trackway

Along the north-west side of the larger field, depicted on Figure 8, were fragments of two parallel gullies, which are thought to be the truncated remains of ditches either side of a trackway (Fig 11). The gullies were aligned north-west to south-east, 4.7–9.1m apart, and the northern extent was noticeably wider. The most substantial section of gully [886] was 0.87m wide by 0.37m deep; the profile had steep sloping sides and a rounded base (Fig 10, S.190). The fill was typical of boundary ditches elsewhere on site; comprising mid red-orange clayey silt with occasional pebble flint, derived from in-wash eroded from the ditch sides and subject to the formation of Iron or manganese salts after deposition. However, this length of gully contained no finds. Its parallel counterpart, gully [915], was much more poorly preserved at 0.19m wide by 0.13m deep and its profile indicated a narrow U-shaped gully, which is probably the very base of the original ditch (Fig 10, S.202). The fill was comparable with gully [886], but still undated as the single sherd (4g) of late Bronze Age pottery was probably residual. Further fragments of gully lay to the south-east on the same alignment as these two parallel ditches and indicating continuation of the trackway. The dimensions of these features and their profiles remained fairly consistent, which only serve to demonstrate their truncation. The fills remained consistent, indicative of natural accumulations with no discrete dumps of occupational material or processing waste. Finds were absent, making it difficult to be certain of the period from which they derived. The only elements of note were where gully [870] curved very slightly before terminating (Fig 11), which might indicate a former entrance between trackway and field, and also further along where the miss-matched alignment of two gully fragments, [924] and [926], indicated that the ditches were recut on at least one occasion along that part of their course.

A single pit in close proximity to this trackway, pit [919], produced 11 sherds (14g) of late Iron Age to Roman pottery. The pit was oval in plan, 1.70m long by 1.25m wide by 0.27m deep, with fairly gently sloped curving sides and a broad flat base. The lower fill comprised mid grey mottled brown-orange silty clay with little pebble flint, merging towards denser flint near the surface. There was no variation in colour or texture, and no scorching. A very slight indentation on the west side is likely to have been the result of taphonomic disturbance.



Scale 1:250 (A4)

Late Iron Age/early Roman trackway Fig 11

4.4 Middle to late Saxon, Norman and early medieval activity

The extent and nature of activity in the period of the 7th–12th centuries was not immediately apparent from the excavated features. A single isolated pit produced middle Saxon pottery and there were c17 scattered isolated pits that were rich in oak charcoal. These were located on the hilltop north of the former farm and loosely spread around the upper slopes overlooking the stream. The approximate dates of these were determined through selected radiocarbon analysis (Table 16, Fig 23). A cluster of possible contemporary features (PG1) lay isolated on the north-east edge of the site (Fig 12); they are thought to include the possible remains of an oven.

A middle Saxon pit

The sole artefactual evidence for Saxon activity at the site comes from pit [581], located slightly south of the former farm and the medieval enclosure group (Fig 15). The pit produced 14 sherds (62g) of pottery from a jar that is ascribed to the 5th–8th centuries AD on the basis of its fabric and the form of the rim.

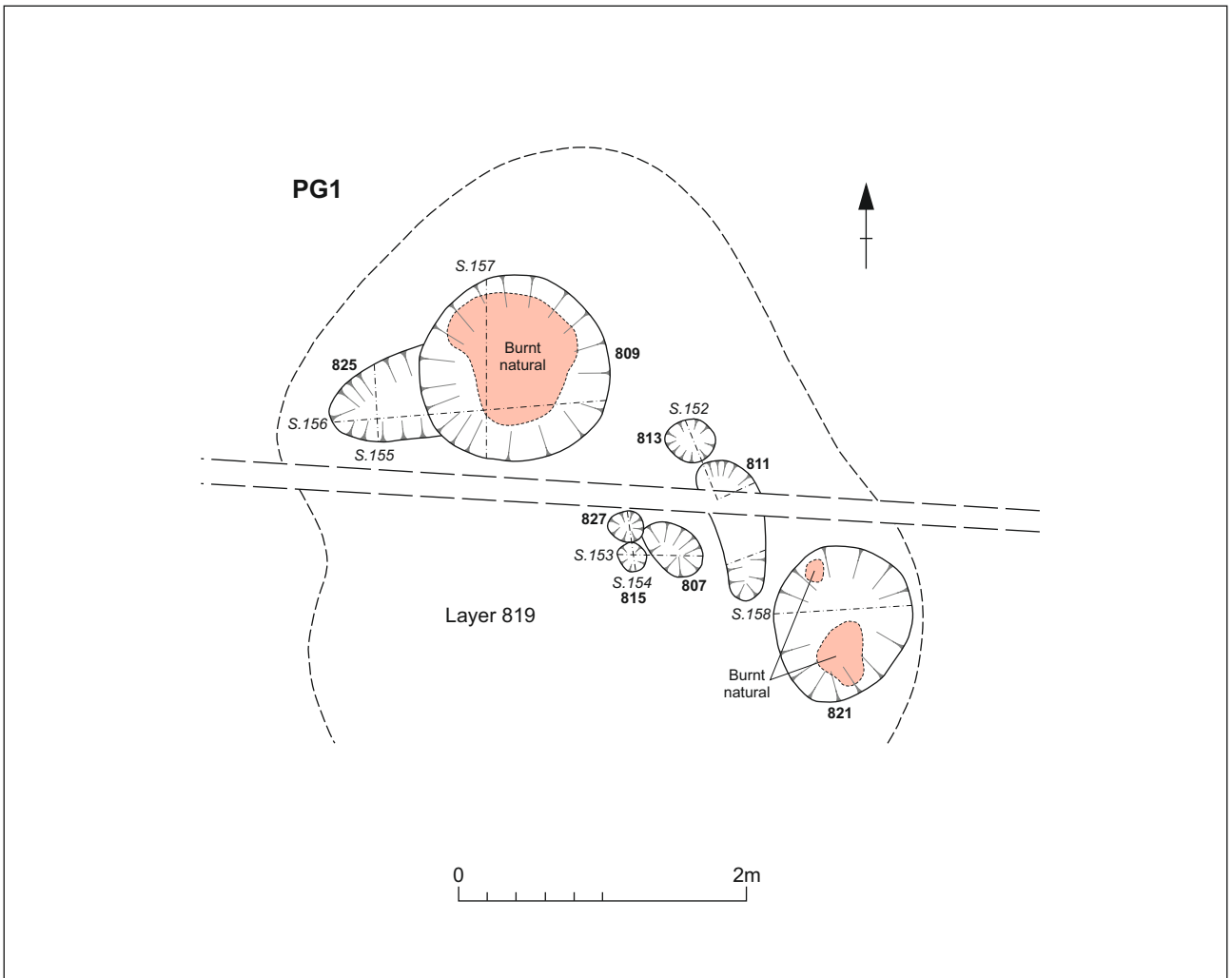
The pit was oval in plan, 1.94m long by 1.5m wide and 0.38m deep (Fig 16, S.111). The sides were distinct but asymmetrical, whilst the east side had a fairly ordinary curved slope; the west side was sharply undercut close to the vertical axis. The basal fill, [580], comprised firm mottled mid brownish-grey silty clay with occasional pebble flint, 0.14m thick, merging towards lighter bluish-grey silty clay, [579], at the surface and both containing similar proportions of charcoal.

A possible oven and associated pits, PG1

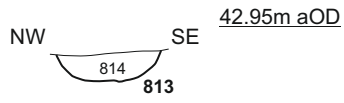
During relocation of the gas pipeline a strip of land was excavated on the north-east side of the main landfill expansion zone, which identified an isolated cluster of pits (Fig 12; Brown 2003). These pits, whilst undated, produced large quantities of charcoal, the character of which was noted during plant-macrofossil assessment as being similar to that of the more dispersed charcoal-rich pits. One pit has subsequently been radiocarbon dated to AD670–775/790–800 cal (95% confidence, 1270±30, Beta 431585).

These pits were varied with differing shapes and sizes in plan. They were disturbed by a land drain and had no clear pattern or arrangement. A possible oven consisted of two features; a shallow oval pit, [825], may have been the flu on the west side of a larger circular pit, [809], which had *in situ* scorching at its base. The flu had gently sloped sides and a flat base, a pit that was 0.7m long by 0.6m wide and 0.12m deep (Fig 13, S.155-157). The larger circular pit had sharp sloping sides and a broad rounded base, 1.4m in diameter and 0.3m deep. The sides and base of this larger pit, [809], were scorched to deep russet fired clay. The basal fill was compact black silt clay with frequent charcoal and well defined boundaries, 0.09m thick. The flu, [825], contained firm yellow orange silty clay also with charcoal flecks. Overlying this was later backfilling that comprised mottled light grey and orange silty clay with moderate charcoal flecks and poorly sorted small sub-angular stones.

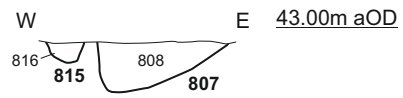
A second pit, [821], also showed signs of burning, but had no evidence of a possible flu. This was broad and sub-circular, 1.1m wide by 0.9m deep, with sharp sloping sides running down to a fairly flat base (Fig 13, S.158). The sides were deep russet heat baked clay, evidence of burning *in situ*. At the base lay firm dark brown sandy clay with frequent charcoal and occasional small pieces of burnt flint, 0.08m thick. The upper fill, 823, was friable mid brown silty clay with less charcoal and burnt flint, 0.11m thick.



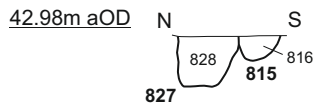
Section 152



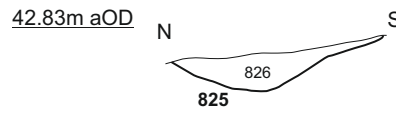
Section 153



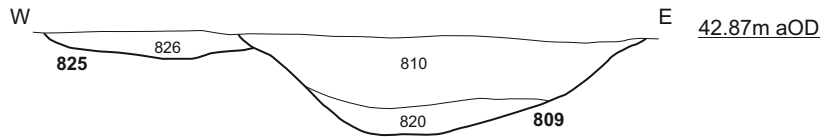
Section 154



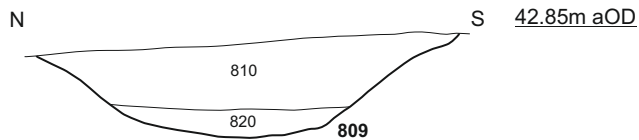
Section 155



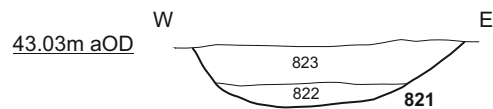
Section 156



Section 157



Section 158



Adjacent to pit [821] was a small linear slot, [811], orientated north–south and slightly rounded in plan with nearly vertical sides and a flat base. This was filled with compact light to mid brown silty clay with frequent charcoal flecks and infrequent small sub-angular stones, 0.14m deep. At the northern end of the slot was a possible posthole, [813], circular and 0.3m in diameter, with a gently rounded base (Fig 13, S.152). This was filled by compact light grey silty clay with frequent charcoal flecks and infrequent small sub-angular stones, 0.09m deep.

To the west of the slot [811] were three possible postholes set close together in a triangular group; [807], [815] and [827] (Fig 13, S.153-154). These small features were of variable size but with very similar fills. Posthole [807] was sub-circular gradually sloping on the eastern side and vertically straight on the western side with a rounded base, 0.46m by 0.3m in plan, with a depth of 0.19m. Posthole [815] was an irregular circle with steeply sloping straight sides and a rounded base only 0.13m wide and 0.07m deep. Posthole [827] was also circular with sharp, nearly vertical sides and a narrow flat base, 0.2m wide and 0.14m deep. The fills were all compact light to mid orange silty clay with occasional charcoal flecks and small sub-angular stones exhibiting somewhat indistinct boundaries with the layer above, (819).

This layer, surrounding and overlaying the pit group, layer (819), comprised firm light yellow-brown silty clay containing frequent flint and pebble inclusions of small size and charcoal flecks.

Scattered isolated pits

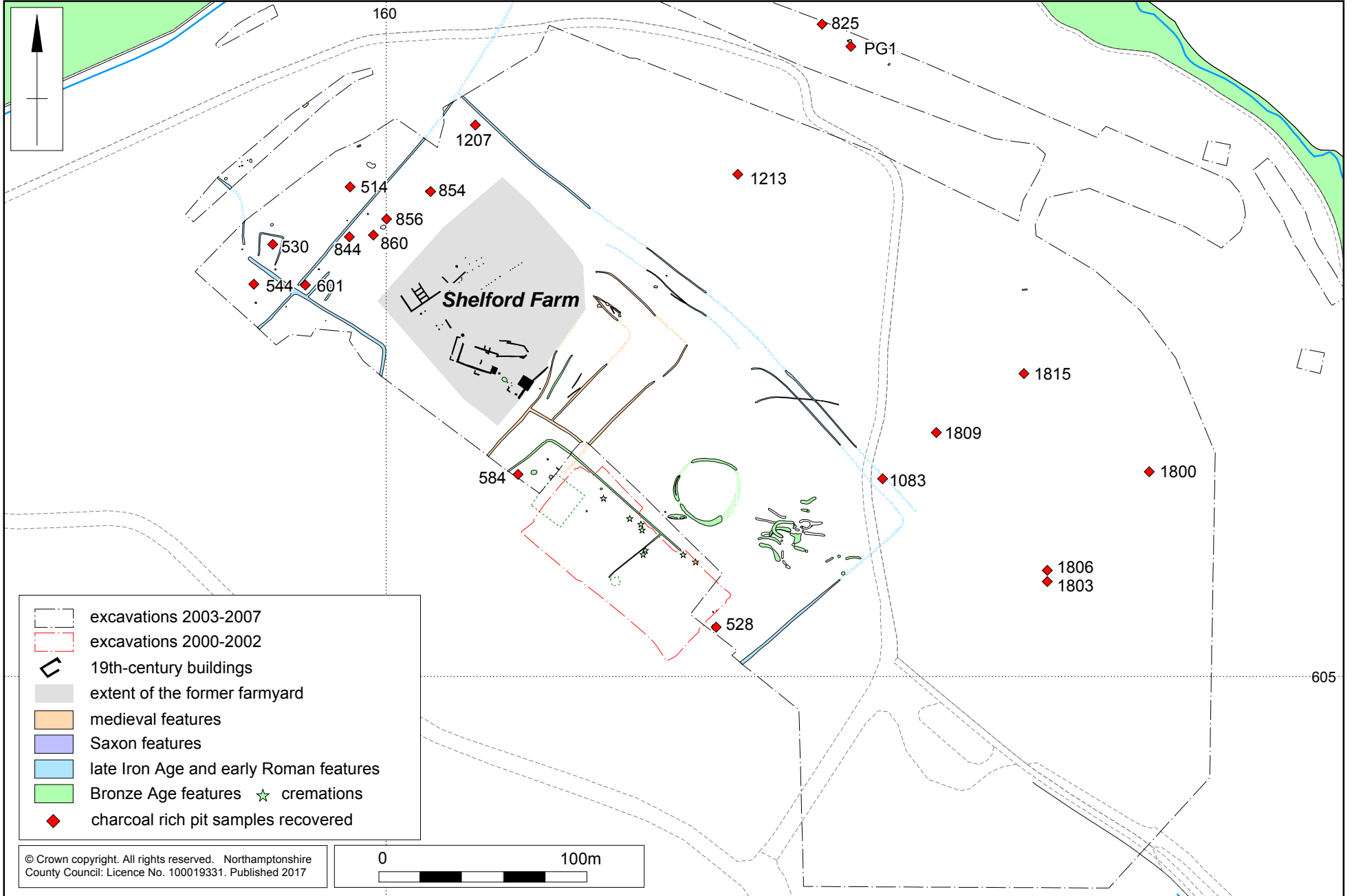
There were a total of 33 undated pits on the hilltop and its surrounding slopes, and many of these are thought to have been earlier, c17 of them, however, contained fills of distinct burnt origin in quantities that warranted some form of ecofactual assessment. These widely distributed pits all shared the same character and were rich in charcoal, but with no artefactual evidence (Fig 14). The charcoal tended either to form a distinct layer at the base of the pit or was integral to the overall fill. Pits of earlier date tended to have charcoal dispersed throughout their fill either as flecks or occasional patches.

Although it might be expected that the smaller of these scattered pits may be the product of small surface fires, the charcoal from pits [854], [856] and [860] was entirely oak heartwood and was notable for the extreme heat of its combustion. The pits described in Table 3 represent those sampled intensively during detailed excavations in 2003, the more widely dispersed pits shown in Figure 14 represent the distribution of all charcoal-rich deposits and includes three pits of known earlier date. Pits [584] and [528] contained pottery and fired clay, dating it to the late Bronze Age. Pit [530] had slightly more silty clay than most charcoal filled pits and contained 11 sherds (72g) of late Iron Age/early Roman pottery. These, however, were not consistent in character with the majority of pits where the fill or a part thereof, was almost completely black. The ten pits scattered across the slopes to the east were all sampled and recorded as part of the strip-map-sample exercise and were broadly similar to those described in Table 3; they were generally shallow and rounded, but almost all of these were entirely filled by black or grey-black silty loam.

Scale 1:2,500 (A4)

Charcoal-rich pits scattered across the hilltop (all periods)

Fig 14



- excavations 2003-2007
- excavations 2000-2002
- 19th-century buildings
- extent of the former farmyard
- medieval features
- Saxon features
- late Iron Age and early Roman features
- Bronze Age features ☆ cremations
- charcoal rich pit samples recovered

© Crown copyright. All rights reserved. Northamptonshire County Council: Licence No. 100019331. Published 2017

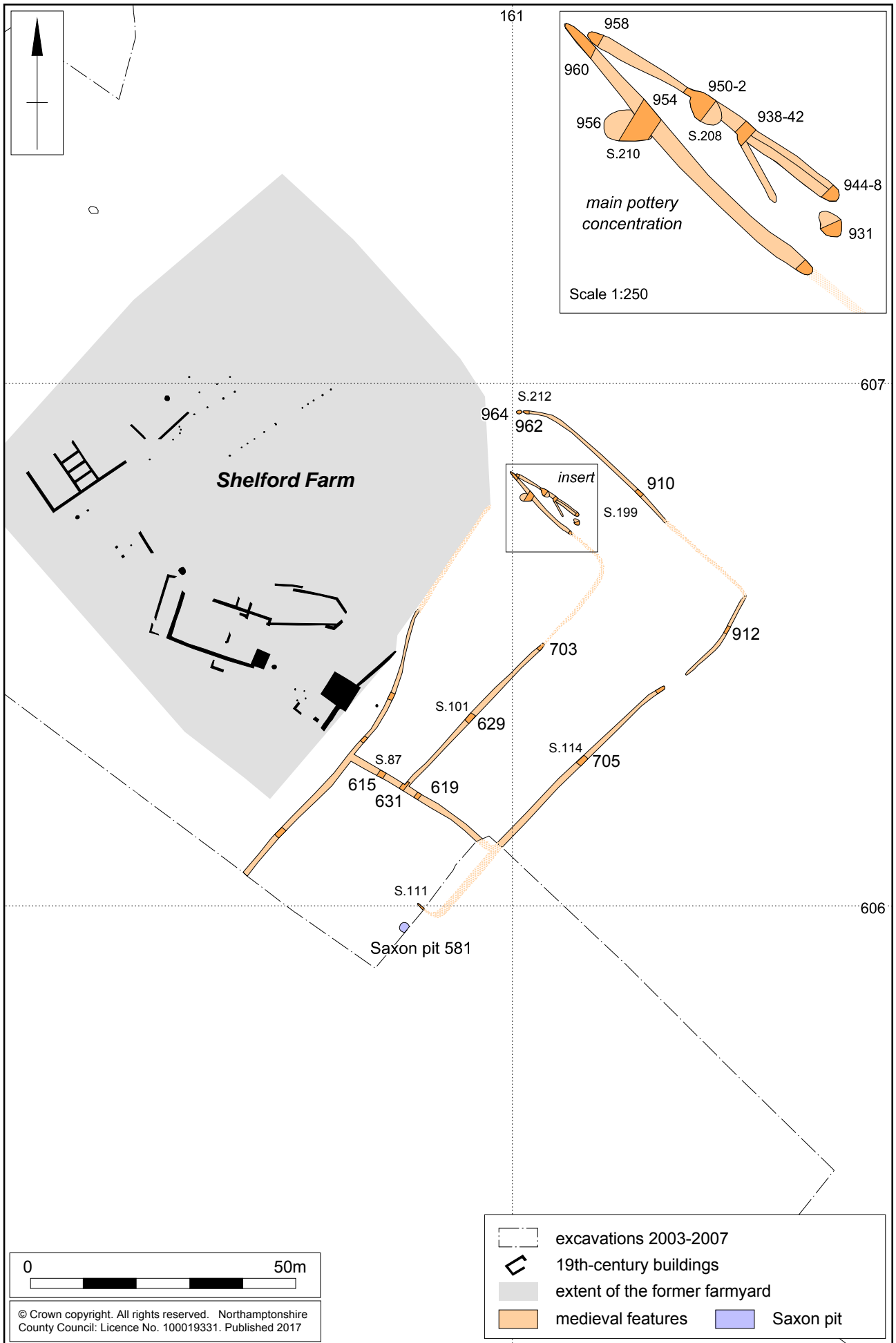


Table 3: Charcoal-rich pits from the 2003 excavations

Context	Description	Width (m)	Depth/thickness (m)	Sample no.
(512)	soft mid grey sandy clay with orange-brown mottles above fill (513)	-	0.16	11
(513)	soft dark grey-black charcoal at base of pit and slumped on one side	-	0.03	12
[514]	circular bowl-like pit with slightly scorched edges	1.11	0.19	-
(543)	firm mid grey silty clay with frequent orange-brown mottles and charcoal deposit towards centre base	-	0.11	16
[544]	roughly circular pit with rounded sides and a flat base	0.74	0.11	-
(600)	firm dark grey-black sandy silt with frequent charcoal near base	-	0.09	26
[601]	sub-circular pit with gently rounded sides and a flat base	0.60	0.09	-
(843)	friable dark grey-black clayey loam, frequent charcoal at base	-	0.16	54
[844]	sub-circular pit with gently rounded sides and a flat scorched base	0.98	0.16	-
(853)	friable dark brown-grey sandy silt with yellow sand inclusions and frequent charcoal at base	-	0.04	55
[854]	circular pit with imperceptible shallow sides and a flat scorched base	0.98	0.04	-
(855)	friable dark brown-black silty loam with moderate patches of charcoal throughout	-	0.15	56
[856]	circular pit with steep rounded sloping sides and a rounded scorched base	0.72	0.15	-
(859)	hard mid yellow-orange and mottled orange brown loamy clay with charcoal and burnt clay throughout	-	0.15	57
[860]	sub-circular pit with shallow curving sides and an uneven scorched base	1.00	0.15	-

4.5 Medieval settlement

A localised concentration of medieval pottery, mainly dated from the early/mid 13th to the late 14th centuries, was recovered from a group of enclosure ditches immediately to the south-east of Shelford Farm (Fig 15). All of the pottery appears to post-date AD1225 and is without exception an entirely domestic assemblage. Unfortunately the high level of disturbance and the long period of use in the farmyard suggest that any evidence for its medieval forebear had long since been swept away. The close proximity of a relatively large assemblage (606 sherds, 4.5kg) of broken kitchen cooking pots and storage jars strongly indicates that the farm had medieval origins. Most of the pottery came from a single group of features comprising gullies, a boundary ditch and two pits, immediately east of the farmyard. Other more scattered sherds were distributed amongst the surrounding enclosure ditches in far lower quantities.



Scale 1:1,000 (A4)

A Saxon pit and medieval enclosure boundaries Fig 15

Two small enclosed paddocks

The level of truncation in this part of the site was generally high such that only the most fragmentary distribution of features could be determined. There were two small paddocks in association with medieval settlement debris, which is unsurprising given that a medieval smallholding would have needed such small enclosures for draft animals or even for yard stock. The two enclosures covered an area of 0.32ha, forming an irregular sub-rectangle with a single internal divide aligned north-west to south-east such that the smaller part formed an almost triangular wedge next to the farmyard, with the larger part wrapping around its north-east and south-west side in a L-shape. A single ditch extended south-west from the corner of the paddocks indicating that they were joined to a wider network of boundaries. This ditch would have lain along the south side of the spinney depicted on the 1st edition Ordnance Survey map of 1877 (Fig 2) and indicates a close comparison in the arrangement of ditches with the two principal axial boundaries in the post-medieval era. It is possible that the access from the farmyard into the paddocks was later incorporated into the post-medieval trackway from the farm, headed south-east, which became the modern access to the farm. Prior to this it would seem the orientation of the enclosures matched closely with that of the bridle route between Broad Oak and Canterbury, north-east to south-west, and that this was the original position occupied by the medieval smallholding.

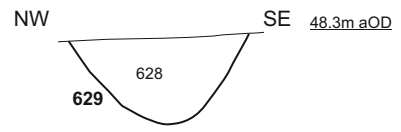
Ditch [615] was 1.0m wide by 0.35m deep, it had slightly rounded sides and a flat base, filled by firm mottled mid grey rusty orange clay with occasional flint pebbles (Fig 16, S.87). The ditch produced a single rim sherd (34g) from a finger-tip decorated bowl dated AD1225–1325. The fill and the pottery dates remained fairly consistent with nine sherds (32g) from ditch junction [631] and one sherd (8g) from ditch [619]. Along the south-east side there was little variation, truncation seemed to have been consistent and this boundary exhibited a profile 1.45m wide by 0.45m deep with gently sloping sides and a rounded base (Fig 16, S.114). The fill was largely identical, will clear signs of diesel/oil spillage from the former farm. Pottery from this section comprised nine sherds (42g) that were very slightly earlier in the range of AD1200–1275, but very clearly abraded. The north-east side was no better preserved at 1.05m wide by 0.38m deep, but the sides of ditch [910] curved inwards gently with a sharp break of slope dropping into a narrow U-shaped gully at the base (Fig 16, S.199). There was no medieval pottery along this boundary. The north-west terminal ended abruptly with little of note, it was 0.43m wide by 0.13m deep, comprising a shallow rounded gully with a flat base (Fig 16, S.212). The fill was light orange-yellow clay with frequent small pebble flint. A single oval pit, [964], at the gully terminal was 0.77m long by 0.51m wide in plan and 0.12m deep. This was little more than a rounded scoop that produced no finds.

The partition boundary within the enclosure, ditch [629], was 0.75m wide by 0.31m deep with a gently rounded profile (Fig 16, S.101). The fill comprised firm mid to dark mottled grey-orange silty clay with moderate pebble flint. Pottery from this ditch comprised four abraded body sherds (69g), dated to AD1225–1325.

Section 87



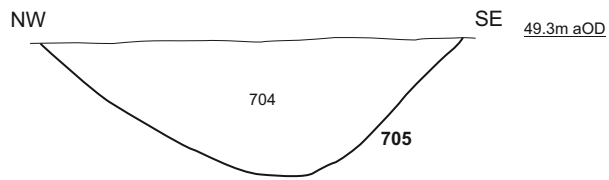
Section 101



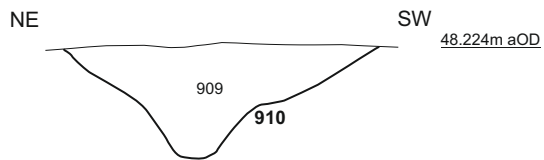
Section 111



Section 114



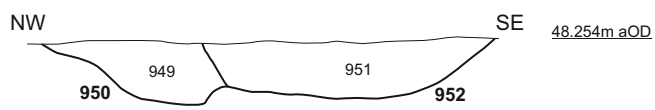
Section 199



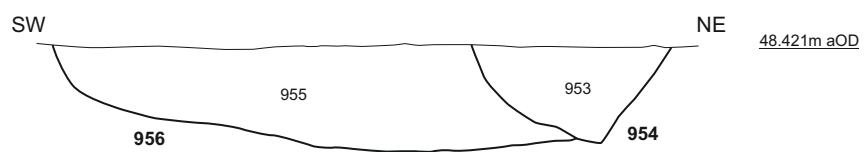
Section 212



Section 208



Section 210



Features containing the most pottery

This tight cluster of features suggested close proximity to habitation given the evidence for dumped domestic waste; they did not in themselves, however, provide evidence for a structure (Fig 15). A substantial pit, [956], was cut by ditch [954], which formed part of the enclosure sub-division. Gully [958] lay slightly eccentric to the north of this, on a roughly north-west to south-east alignment, which showed evidence it was recut at the south-east end, presumably because of the accumulated waste. A third short gully, [938], cut the top of this sequence together with pit [952], and an isolated pit, [931], lay at the south-east end of the group. Overlying many of the features was a spread of material, layer (936), which probably represented activity from the storage or disposal of midden waste.

Pit [956] was sub-circular in plan, partially disturbed by modern farm activity. The surviving portion was 1.4m wide by 0.30m deep with a steep rounded edge that curved swiftly into a flat base (Fig 16, S.210). The fill comprised hard light grey-brown clay with moderate pebble flint and gravel, together with Iron panning at the base. A significant assemblage of 106 sherds (923g) of pottery was recovered from this pit belonging to the late 13th or possibly early 14th centuries.

The top of the pit was cut by ditch [954], 0.68m wide by 0.28m deep, comprising a steep U-shaped profile filled by mottled orange-brown and blue-grey clay containing occasional pebble flint and frequent charcoal flecks (Fig 16, S.210). This boundary ditch produced 98 sherds (765g) of pottery produced at Tyler Hill, Canterbury, AD1275–1350, all of which are utilitarian kitchen vessels.

The 14.3m long stretch of gully between terminals [958] and [944] produced a total of 39 sherds (184g) of pottery, all dated AD1200–1275. This gully was 0.50m wide by 0.20m deep; it had a slightly eroded upper edge that dropped sharply into a flat-bottomed channel with similar fill to the neighbouring ditch (Fig 16, S.208). The recut was at the south-east end only, 0.18m wide by 0.13m deep, and contained 22 body sherds (122g) that broadly date to AD1225–1325. A small circular posthole, [946], lay within the south-east terminal of the gully that was 0.32m in diameter and 0.10m deep. The mottled blue-grey silty clay fill contained two sherds (5g) of pottery. The gully was cut by pit [952], which was oval in plan, 0.92m wide by 0.18m deep. The pit had a rounded profile filled with mottled mid blue-grey and orange silty clay from which 225 sherds (1,289g) of utilitarian pottery was recovered; mainly from jugs dated AD1250–1325.

Cut at a tangent to the main length of gully was a shorter gully, [938], that was 0.29m wide and only 90mm deep. The fills were similar to the other features and it produced six sherds (7g) of pottery.

An isolated pit at one end, pit [931], was sub-circular in plan, 0.95m wide by 0.15m deep. The lower and upper fills merged together from light blue-brown and orange silty clay towards a slightly darker more charcoal stained upper horizon. Together these fills produced 15 sherds (36g) of pottery dated AD1225–1325 including parts of a jug and a bowl.

The dark blue-grey silty clay spread, layer (936), which overlay these features was machined off following initial investigation, in order to expose the underlying features. The deposit was 0.12m thick and contained within it 69 sherds (860g) of pottery, much of which was largely towards the later medieval date range AD1300–1350 with some residual sherds from AD1275 onwards. The spread is thought to have been created through storage of midden materials, given the frequency of pottery abrasion.

Other deposits containing medieval material

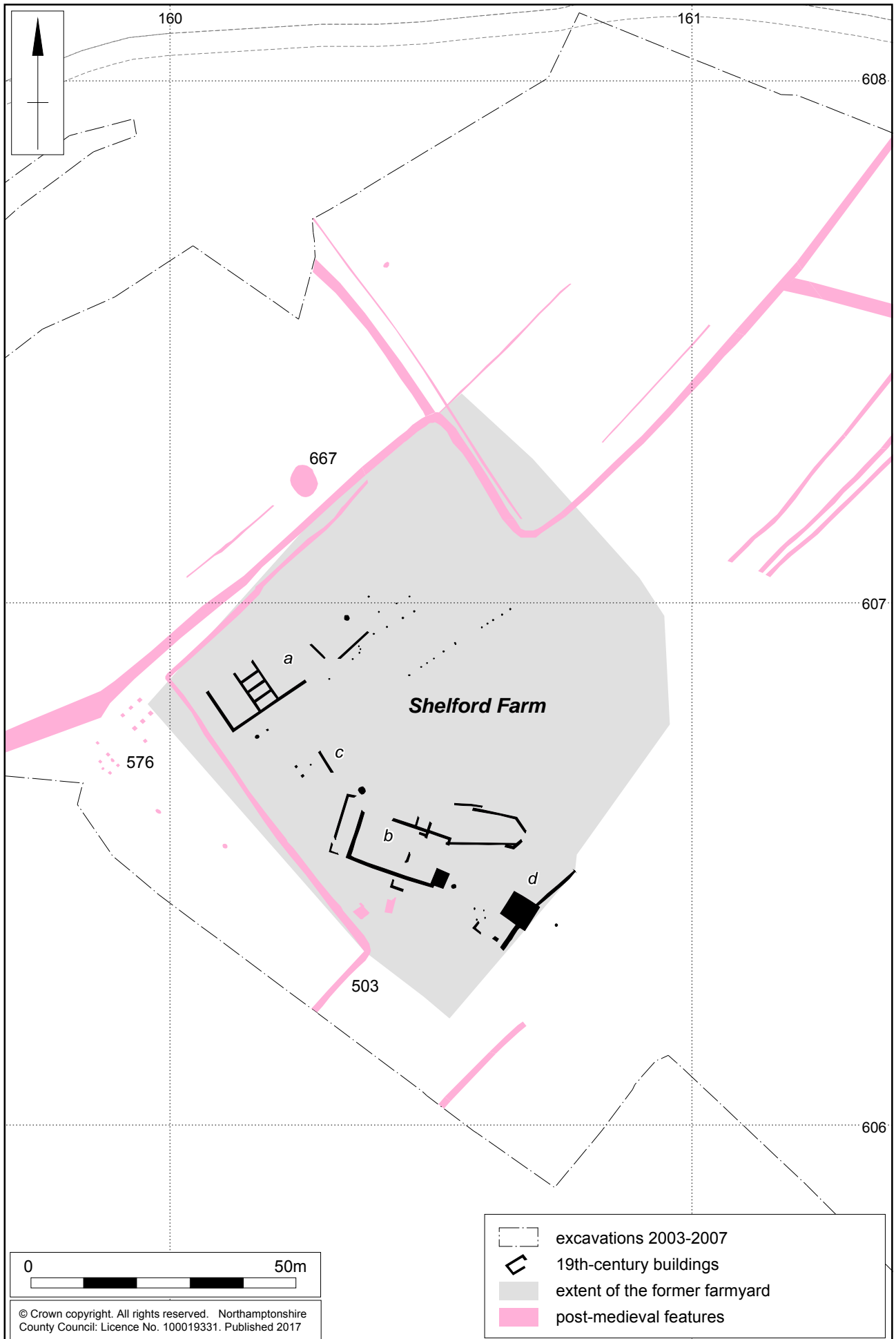
North-west of the farm, where the hillside sloped down towards the stream, there was a build-up of material that lay above the natural subsoil, identified during relocation of the gas pipeline (Brown 2003). This layer, (829), comprised firm light brown silty sand with chalk flecks and pebbles, 0.24m thick (Fig 5). The layer contained moderate amounts of tile and some pottery of medieval origin, 3 sherds (15g) dated AD1250–1325, fragments of lava quern and a fragment of Roman *tegula*. Given the mix of period materials it may be supposed that this was all redeposited.

A small cluster of intercutting pits to the north-west of the farm lay at the top of the hill slope above the stream, which produced 2 sherds (7g) of pottery dated AD1200–1250 (Fig 5). The cluster comprised three pits, [992], [994], [996], with each cut offset slightly further to the north-east. The total area covered by the pits was approximately 3.0m long by 1.8m wide; the earliest pit in the sequence contained the pottery, whilst the other two had no finds. In section it was tempting to see them as a sequence of fills with tip lines because their depth remained consistent, but in plan they were different sizes. The latest pit, [992], was 1.78m long by 1.12m wide by 0.11m deep. All three pits shared similar fills that were generally composed of mid grey-brown silty clay.

4.6 Post-medieval and modern settlement

The earliest known mapped depiction of Shelford Farm comes from the 1st Edition Ordnance Survey map of 1877 (Fig 2). This arrangement of buildings compares well with the distribution of 19th-century cut features, which were evident where former wall foundations and sub-surface structures were grubbed out prior to the archaeological works (Fig 17). Although there was little evidence for the outbuildings that had stood on the north and north-east sides of the yard, the two principal buildings on the north-west (a) and southern (b) sides were clearly identifiable. Fragments of a third, lesser building (c) lay between these upon the west side of the yard, but without the historic map it would not have been evident that this was the foundation of a former structure. A fourth building (d) is mapped at the end of a small spinney on the south side of the farm, which was identified containing a large square pit that suggested the removal of a buried tank, possibly for effluent. A line of 11 postholes aligned north-east to south-west within the farmyard did not correspond with any mapped boundaries, but were clearly of post-1877 origin. The surrounding ditches and boundaries were all of post-medieval or modern origin, most of which contained quantities of debris from the demolition of the farm. None of these features corresponded with the 1877 map and many of the ditches are likely to have been boundaries in use during the 20th century.

Although little can be said about the farm buildings from their grubbed out remains it was still possible to estimate the dimensions of the buildings. The largest building (a) on the north-west side of the yard seems to have been the main farmhouse, as seen on the aerial image (Fig 4). This building seems to have comprised two elements orientated north-east to south-west, probably the original building with an extension on one end, 42m by 12m. The north-east end seems to have had less substantial foundations, mainly built around a timber frame at least 16m by 8m, and would logically appear to be the older part of the farmhouse. The remainder of the building seems to have comprised major extension work on the south-west side with a smaller extension to the north (rear).



Scale 1:1,000 (A4)

19th-century wall foundations and other features Fig 17

© Crown copyright. All rights reserved. Northamptonshire County Council. Licence No. 100019331. Published 2017

The other principal building (b) on the south side of the yard was probably rebuilt or modified on at least one occasion. The original building was orientated north-west to south-east, about 18m by 10m, and the later structure seems to have been closer to 23m by 12m, set upon the same footprint.

It was not possible to determine anything informative about the smaller building (c) on the west side of the yard. The building (d) that lay to the south of the farm, at the north-east end of a small spinney, appeared to have been at least 20m by 9m, orientated north-east to south-west, and contained within it a 6m by 5m rectangular pit, possibly for a buried tank.

5 THE FINDS

5.1 Worked flint by Yvonne Wolframm-Murray

In total there were 21 pieces of worked flint from three phases of work as residual finds from late Bronze Age, Iron Age, Roman, undated and unstratified contexts. The flint comprised two cores, 13 flakes, two blades, two scrapers, one re-utilised axe fragment and one piercer (Table 4).

Table 4: Quantification of worked flint

Item	Whole	Fragmented	Total
core	2	-	2
flake	6	6	12
retouched flake	1	-	1
blade	1	-	1
utilised blade	1	-	1
scraper, end	-	1	1
scraper, end/side	-	1	1
piercer	1	-	1
axe fragment	-	1	1
Total	12	9	21

The condition of the assemblage is good and shows little post-depositional edge damage except occasional nicks to linear retouch. The raw material comprises light grey-brown to dark grey coloured vitreous and opaque flint. The quality of the raw material is mixed, with the flint displaying occasional hackly fractures. The cortex is light to dark brown in colour with a generally smooth, rolled and weathered surface. The raw material is likely to have been derived from local gravel deposits.

Two cores were recovered; one is a semi-cylindrical blade core that has three striking platforms, of which two oppose each other and show evidence for blade removal, through the use of a soft hammer. Another core is cylindrical with a single striking platform, it is poor quality flint and only a few flakes/blades have been struck off.

The assemblage comprises 13 flakes, of which six are broken. One relatively large flake is retouched down one lateral edge and is partially affected by post-depositional edge damage. There are also two blades; one blade shows utilisation scars near the proximal end, but the remainder is obscured by edge damage.

There are two scrapers in the assemblage, comprising part of an end/side scraper and a broken end scraper. The end/side scraper has abrupt and semi-abrupt retouch on the distal end and along one lateral edge. The end scraper has abrupt retouch on the distal end; a lateral edge was removed post-deposition, obscuring any further retouch.

A piercer was also recovered, showing a point fashioned through a large and small retouched notch at the distal end of a flake.

A cutting edge/side fragment from a flint axe has a blade, possibly detached through use, the rounding and spalling at the distal end of the blade suggests utilisation. The axe was polished; it is possible to see striations leading at approximately 45° angles to the cutting edge. The blade indicates a later reuse of the broken axe as a core; a few previous scars are notable.

The technological characteristics of the assemblage suggest a broadly late Mesolithic/early Neolithic to late Neolithic/early Bronze Age date. There is evidence of both soft hammer and hard hammer usage, indicative to both periods. The blade core and utilised blade are of a late Mesolithic/early Neolithic date. The polished axe is Neolithic in date while the scrapers and piercer are of late Neolithic/early Bronze Age origin.

5.2 Burnt flint by Alex Thorne

Sixty-eight fragments of heat-affected flint were recovered, weighing 952g. The raw material is in the form of small gravel pebbles, some showing frost damage, which are from the locally occurring glacial gravel. The flint has a smooth rounded cortex, a thick white/glossy patina, and occasionally roughened creamy brown cortex. Some nodules exhibit an ochre brown stained or creamy coloured cortex and are worn through attrition of the terrace gravels, others are heavily shattered.

There are 23 pieces of burnt flint from late Bronze Age pit [570], ditches [572], [725] and late Iron Age to early Roman ditch [592]. Each piece of burnt flint is up to 60mm in diameter. Four fragments from ditches [572] and [725] were of similar character being heavily crazed and slightly spalled, all are grey/white patinated. Most but not all are crazed, the remainder are simply reddened or burnt dark grey.

The greatest concentration of burnt flint, 45 fragments (573g), is from a small group of pits (PG1); [805], [809], [811], [821] and [825]. One of the features, which may have been an oven with a flue on one side, has been radiocarbon dated to within the middle Saxon period, 7th–8th centuries AD. Many burnt flint fragments conjoin within each context; five from pit [805] form two nodules; two from pit [811] from a single nodule; and five from oven [809] to form two nodules. Three fragments from pit [825] are part of the same nodule. A single fragment from oven [809] may have been worked, representing a primary flake to remove cortex, but, as the bulbar end has shattered, this cannot be confirmed. The flint was subjected to prolonged heating.

5.3 Bronze Age pottery by Anna Doherty

A moderately sized assemblage of prehistoric pottery is divided between the late Bronze Age and the late Iron Age/early Roman periods, the latter is reported separately. The majority of the assemblage belongs to the late Bronze Age, post-Deverel-Rimbury (PDR) tradition, comprising 1,046 sherds (13,199g) of pottery, estimated at 453 vessels. Most of the features from which the pottery derives can be found on Figure 6, although more distant features are not depicted. It should be noted that a number of context groups containing small quantities of featureless body sherds have been quantified with the late Bronze Age material because they include comparable flint-tempered fabrics; however flint-tempered wares were particularly long-lived in north-eastern Kent and this material, which makes up c10% of the total assigned to this period, is of uncertain date.

The pottery was examined using a x20 binocular microscope. Fabrics were defined according to a site specific type series which was formulated in accordance with the guidelines of the Prehistoric Ceramics Research Group (PCRG 2010). The assemblage was quantified by sherd count, weight and Estimated Vessel Number (ENV) on *pro-forma* sheets which are retained for the archive and entered onto an Excel spreadsheet.

Fabric type-series

FLIN1	common, poorly-sorted flint of 0.5–3mm in a dense slightly silty matrix; rare organic or Iron rich inclusions may occur
FLIN2	moderate to common, moderately sorted flint of 0.2–2.5mm in a dense slightly silty matrix; rare organic or Iron rich inclusions may occur
FLIN3	moderate, moderately to well-sorted flint of 0.2-1.5mm in a dense slightly silty matrix; rare organic or Iron rich inclusions may occur and surfaces are often smoothed
FLIN4	moderate, moderately to well-sorted flint of <1mm in a dense slightly silty matrix; surfaces are frequently well burnished
FLIN5	moderately sorted coarse flint, mostly between 2–5mm, in a dense slightly silty matrix
FLGR1	sparse flint of 0.2–0.5mm and sparse rounded grog of 1–2mm in a dense slightly silty matrix; the grog is similar to the background clay matrix
FLGL1	similar to FLIN2 but containing sparse glauconite of 0.2–0.3mm
FLQU1	sparse poorly-sorted flint of 0.5–4mm in a matrix with moderate quartz of 0.2–0.3mm
FLQU2	rare or sparse fine flint of <1mm in a very silty matrix with moderate/common quartz of <0.1mm in size
GROG1	moderate grog of 1–2mm in a slightly silty matrix; some examples contain rare flint of up to 0.5mm
QUAR1	moderate coarse rounded quartz of 0.3–0.5mm

The pottery

The late Bronze Age pottery derives from several areas of the site. Two isolated pits, [528] and [707], located near the southern extent of the excavated area, together produced more than half of the Bronze Age assemblage. Pit [528] contained an exceptionally large group of 500 sherds. The rest of the pottery comes mainly from enclosure ditches and associated pits to the north-west of the ring ditch, as well as from the fills of the ring ditch itself; however most of these are small stratified groups.

The group from pit [528] contains large and unabraded sherds, suggesting that they derive from nearby settlement activity. However, these sherds were clearly well broken and mixed. Some sherds appeared to have been burnt but these form only a small proportion of the group, indicating that the pit contained material redeposited from different locations.

Fabrics

Fabrics from contexts assigned to the late Bronze Age are quantified in Table 5. All of these are flint-tempered and the vast majority are medium coarse wares with dense slightly silty matrices containing no other major inclusion types, beyond a few naturally occurring organic or Iron rich inclusions (fabrics FLIN1, FLIN2, FLIN3). There is a relative paucity of very coarse flint-tempered wares (FLIN5). One vessel, assigned to fabric FLIN3, appeared to have fine flint grit applied to the exterior surface of the shoulder area (not illustrated). Flint grit on the underside of the bases is a very

prevalent trait in the PDR tradition but is an unusual characteristic on other areas of the body. It has, however, also been identified nearby at Monkton Court Farm and perhaps represents a localised stylistic or technological trait (Macpherson-Grant 1994, 254).

Table 5: Quantification of fabrics from late Bronze Age contexts

Fabric	Sherds	Weight (g)	ENV	%Sherds	%Weight (g)	%ENV
FLGL1	3	44	1	0.3	0.3	0.2
FLGR1	3	16	2	0.3	0.1	0.4
FLIN1	97	1,914	58	9.3	14.5	12.8
FLIN2	569	8,404	282	54.4	63.7	62.3
FLIN3	94	1,074	59	9.0	8.1	13.0
FLIN4	66	565	13	6.3	4.3	2.9
FLIN5	8	208	2	0.8	1.6	0.4
FLQU1	54	520	5	5.2	3.9	1.1
FLQU2	151	444	31	14.4	3.4	6.8
Totals	1,045	13,189	453	100.0	100.0	100.0

Very fine and often highly burnished wares without inclusions in the background matrices, FLIN4, make up a very small percentage of the assemblage. Finer wares with more visible quartz inclusions at x20 magnification are slightly more common but are absent from the largest group from pit [528]. This fabric type, FLQU2, along with a coarser ware containing larger quartz grains, FLQU1, may be indicative of assemblages of slightly later date; however, they were not conclusively associated with diagnostically later forms.

A very small number of flint-tempered sherds have other inclusions such as grog or glauconite, FLGR1 and FLGL1. Body sherds from a single vessel in the latter fabric originate from clays located on Greensand and are therefore not local. This is supported by evidence from other local sites suggesting a limited amount of trade or exchange with more distant settlements (Macpherson-Grant 1994, 249).

Four sherds from the same vessel are uniformly oxidised to a bright red colour and resemble haematite coated wares; however, this effect was noted in section in the margins of the sherd as well as on the surfaces and may be an effect of firing rather than a deliberate surface treatment.

Forms and decoration

The range of vessel forms is limited with majority of identifiable types being bipartite jars with rounded shoulders and upright to very slightly everted rims. This form was especially prevalent from pit [528], where as many as 20 similar examples were identified (Figs 18–21, 1–19), although it is possible that some of these are non-fitting sherds from the same vessel. Most examples are undecorated and only one has fingernail decoration along the rim (Fig 20, 15). Several examples include groups of horizontal tooled or combed lines (e.g. Fig 20, 14; Fig 21, 19). In most cases a single zone of lines was identified just above the shoulder although one vessel had two groups of lines (Fig 21, 16). The only diagnostic non-jar form from pit [528] was a small bowl/cup (Fig 21, 20), which also features this style of decoration and is particularly common in this part of Kent (Jones 2009, fig 2.11, 84). Macpherson-Grant (1994, 284) suggests that some of the decorated products from Monkton Court Farm and Highstead are so similar that they could even be products of a single potter. At the very least these similarities suggest that local potting traditions were very alike. A few

vessels from the HS1 rail scheme have slightly similar horizontal line decoration (Morris 2006, fig 3.6, SLT/51), which is clearly a much less prevalent trait further afield in Kent.

Pit [707] was located near to pit [528], and contained a reasonably large but very fragmentary assemblage in which over half of the sherds are in a slightly more quartz-rich fine fabric FLQU2. The most diagnostic sherd in this group is a finely burnished ovoid jar/bowl (Fig 22, 21). This is an unusual form and, although there are some loose parallels with vessels from other local assemblages, generally these have more open profiles (Highstead F43; Couldrey 2007, 108). Another very fragmentary rim in this group appears to be very strongly everted and there is also a body sherd with a double row of fingernail impressions (not illustrated). Overall, there is a more diverse range of forms and slightly different fabrics which may suggest a slightly later date of deposition than the larger group from pit [528].

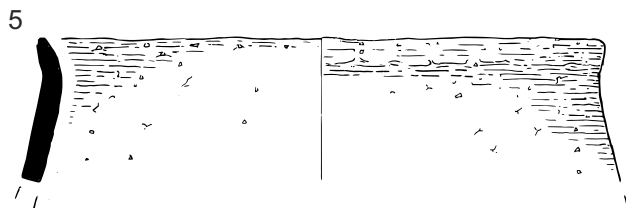
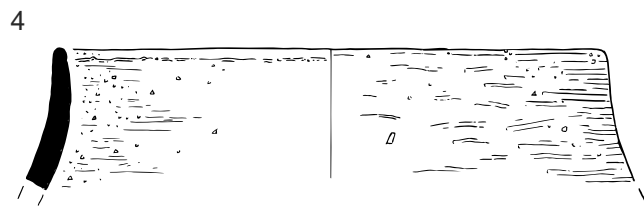
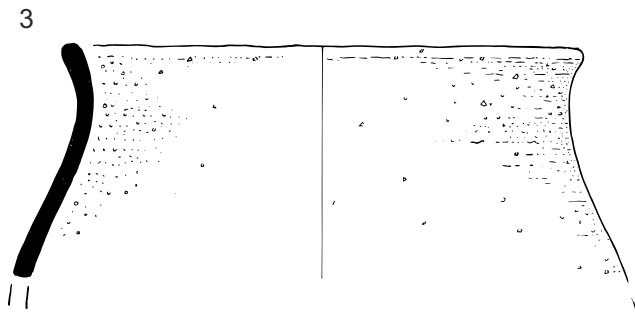
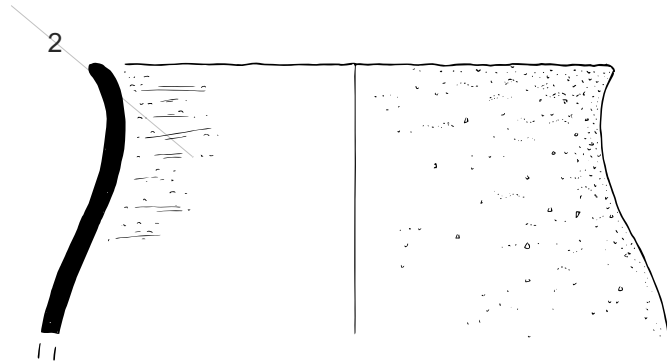
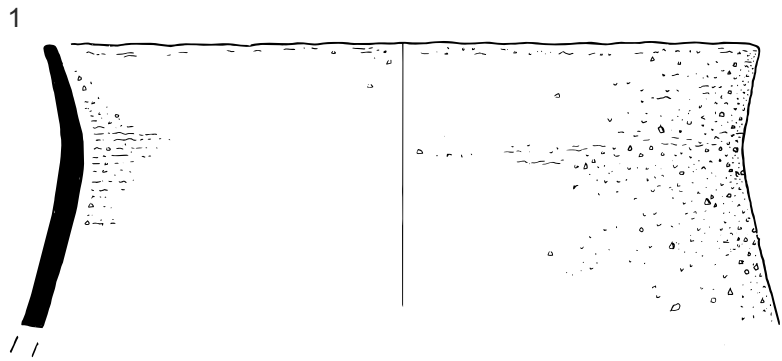
Very few feature sherds were found elsewhere on the site but included a shouldered jar/bowl from pit [584] (Fig 22, 22), a plain rim jar from pit [836] (Fig 22, 23) and a fine ware shouldered form from pit [570] (Fig 22, 24).

Overview of dating

There are very few coarse flint-tempered wares and this suggests that most activity on site dates well within the late Bronze Age, since very coarse flint-tempered fabrics are a characteristic feature of transitional middle-late Bronze Age groups. A single plain rim jar (Fig 22, 23) is arguably an earlier PDR type.

In many respects the pottery is comparable to other local assemblages dated to the latter part of the late Bronze Age. Monkton Court Farm has metalwork sequences dating to c900–600BC, and the pottery was considered essentially to belong to the decorated phase of the PDR tradition (Macpherson-Grant 1994, 250), and was thought to be directly contemporary with the large assemblage from Highstead Period 2 (Bennet & Macpherson-Grant 2007, 11). Like both of these assemblages and groups from the Weatherlees–Broadstairs pipeline route (Jones 2009), the pottery from Shelford Farm is dominated by purely flint-tempered wares. The largest group from pit [528] is somewhat plainer than is typically the case at these sites. It is notable that almost all of the decoration in the current assemblage is tooled or combed; fingertip decoration was only noted on two sherds, and is much less common than at Monkton Court Farm or Highstead (Macpherson-Grant 1994, 257; Couldrey 2007, 122). Impressed decoration in the current assemblage is more subtle than on examples from other sites (Macpherson-Grant 1994, Fig 15, 270). This suggests that the largest group from pit [528] may be of marginally earlier date than these assemblages, perhaps belonging in the developed plain ware phase, c950–800BC, or early in the decorated phase, c800–600BC, of the PDR pottery tradition.

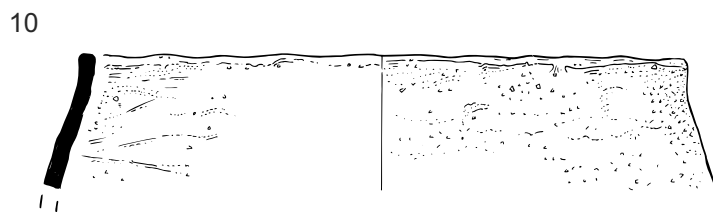
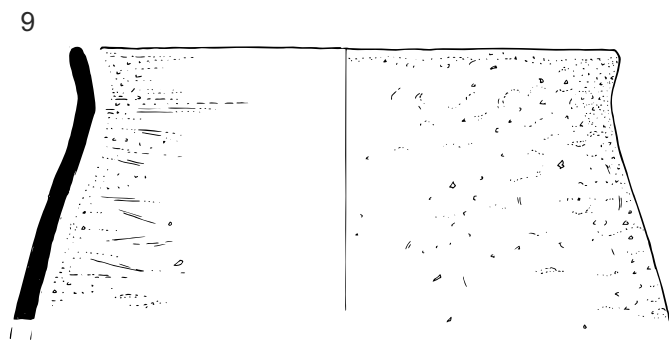
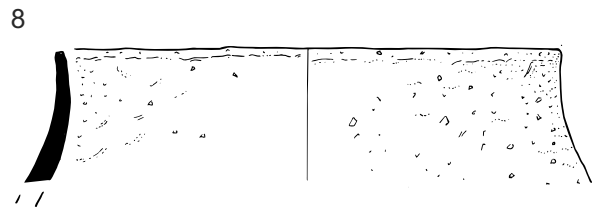
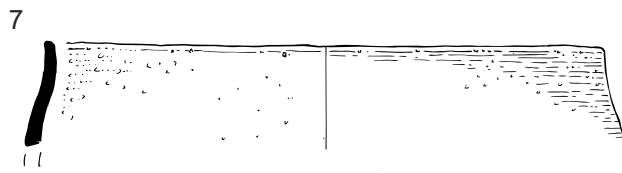
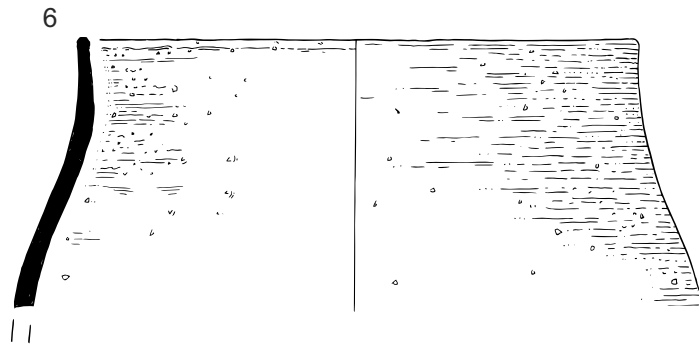
There is a complete absence of rusticated sherds. Rustication is a trait which occurred very occasionally in Period 2 at Highstead, c900–600BC, but which made up a very significant proportion of the assemblage in Period 3, c600–400BC (Couldrey 2007, 166). A similar absence was noted at Monkton Court, where it was taken as evidence of abandonment before the early Iron Age (Macpherson Grant 1994, 278).



0 100mm

Scale 1:3

Late Bronze Age pottery from fill (527), pit [528], 1-5 Fig 18

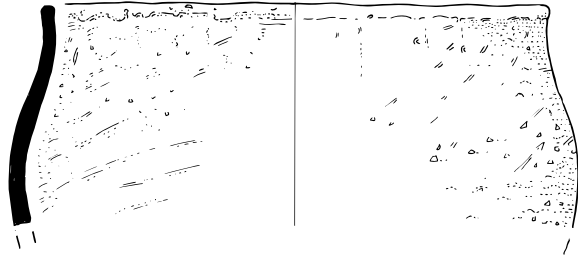


0 100mm

Scale 1:3

Late Bronze Age pottery from fill (527), pit [528], 6-10 Fig 19

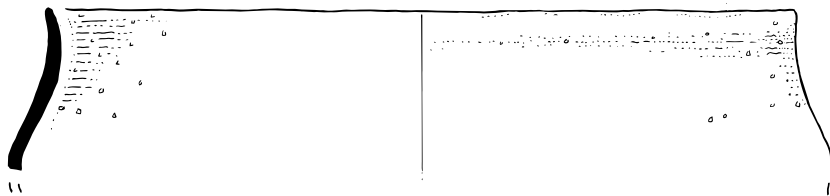
11



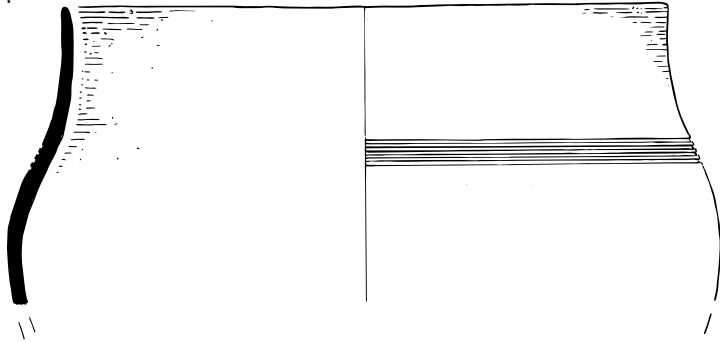
12



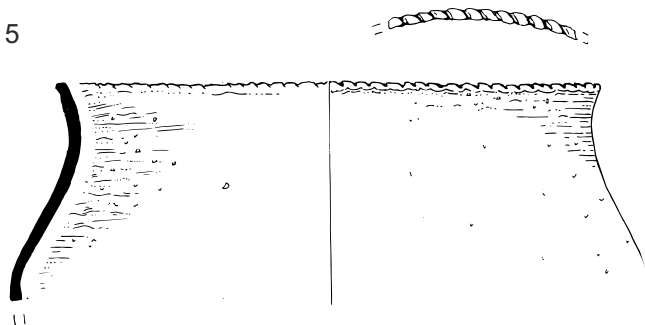
13



14

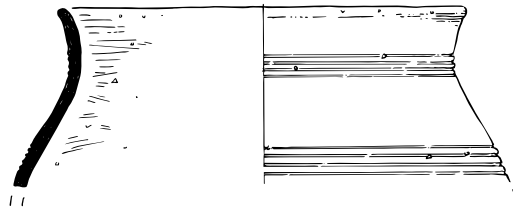


15

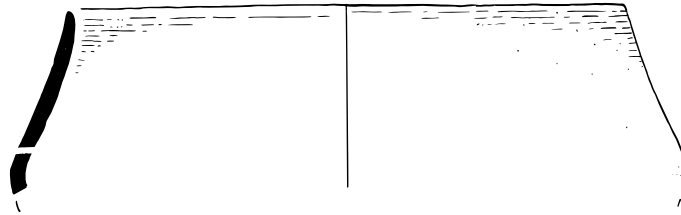


0 100mm

16



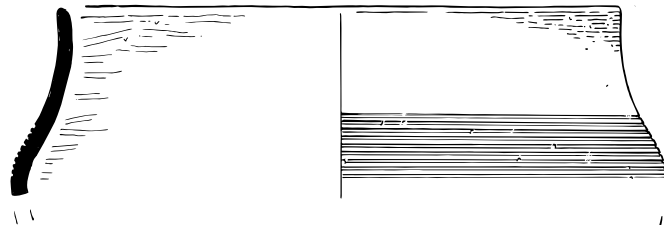
17



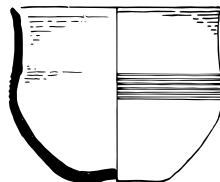
18



19



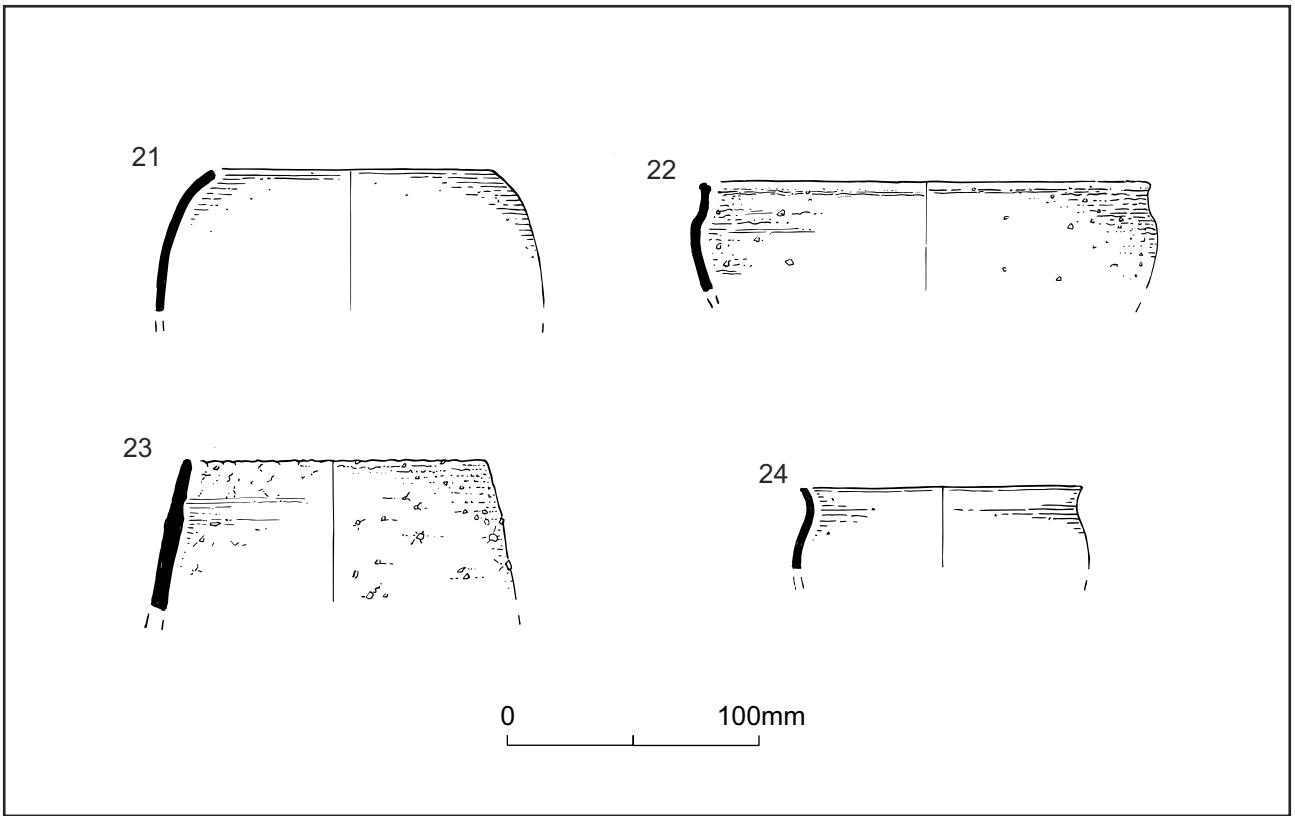
20



0 100mm

Scale 1:3

Late Bronze Age pottery from fill (527), pit [528], 16-20 Fig 21



Scale 1:3

Other late Bronze Age pottery, 21-24 Fig 22

Illustrations

Figures 18–21, fill (527), pit [528]

- 1 Plain bipartite jar; fabric FLIN2
- 2 Plain bipartite jar; fabric FLIN2 (very similar to P3)
- 3 Plain bipartite jar; fabric FLIN2 (very similar to P2)
- 4 Plain bipartite jar; fabric FLIN1 (well burnished surfaces similar to P5)
- 5 Plain bipartite jar; fabric FLIN1 (well burnished surfaces similar to P5)
- 6 Plain bipartite jar; fabric; fabric FLIN2
- 7 Plain bipartite jar; fabric FLIN2
- 8 Plain bipartite jar; fabric FLIN2 (slightly burnt or overfired)
- 9 Plain bipartite jar; fabric FLIN2 (slightly burnt or overfired)
- 10 Plain bipartite jar; fabric FLIN2
- 11 Plain bipartite jar; fabric FLIN2
- 12 Plain bipartite jar (thin-walled); FLIN3
- 13 Plain bipartite jar; fabric FLIN2 (burnt or over-fired)
- 14 Bipartite jar with parallel tooled/combed horizontal line decoration; fabric FLIN4
- 15 Bipartite jar with fingernail impressions along the rim; fabric FLIN2
- 16 Bipartite jar with double row of parallel tooled/combed horizontal line decoration; fabric FLIN3
- 17 Plain bipartite jar/bowl; fabric FLIN4
- 18 Plain bipartite jar/bowl; fabric FLIN3
- 19 Bipartite jar with parallel tooled/combed horizontal line decoration; fabric FLIN3
- 20 Open bipartite bowl/ cup with parallel tooled/combed horizontal line decoration; fabric FLIN4

Figure 22, from other contexts

- 21 Thin-walled fine ware form with plain ovoid profile; fabric FLQU2, fill (706), pit [707]
- 22 Plain shouldered jar; fabric FLIN3, fill (582), pit [584]
- 23 Plain profile jar; fabric FLIN2, fill (835), pit [836] (see Fig 5)
- 24 Shouldered fineware jar/bowl; fabric FLIN4, fill (569), pit [570]

5.4 Fired clay by Pat Chapman

This assemblage of 1,169 fragments of fired clay, weighing 17.3kg, comprises two large groups with a scatter of fragments from other contexts (Table 6).

The group from late Bronze Age pit [528] comprises 489 fragments, sub-rounded and angular in shape, weighing 7kg. These are all made from slightly soft or friable orange-red clay with some black areas. The largest 108 pieces were collected on site. The biggest piece is 150x90x50mm with wattle impressions on one side and a flat surface on the other. Some slightly smaller pieces have a similar appearance with flat surfaces and wattle impressions indicative of structural remains. These impressions are typically 15mm in diameter. The remaining fragments, recovered from soil samples, are smaller.

The other group, from pit [1051], comprises 647 fragments, weighing 10kg. The feature was an isolated pit, slightly to the east of the probable late Bronze Age clay extraction gullies (Fig 6), in the gardens of the former cottages (not illustrated). They are all made of sub-rounded soft friable orange clay. The pieces range from the largest, 130x110x90mm, to an average of 70x60x50mm. A few of these fragments have blackened areas which are slightly harder than the surrounding fabric, whilst a few others are soft powdery grey. Some small fragments and areas on a few larger pieces

show signs of vitrification, being grey and cindery like a crucible. This suggests that these fragments came from an area of high temperature, but they are not structural.

The remaining 36 fired clay fragments, weighing 332g and scattered through 16 contexts, are typically small irregularly-shaped hard fragments of orange-brown/red-brown clay, particularly the three from fill 585 of late Iron Age to early Roman ditch [669] (Fig 9), which are highly vitrified and have fused with small pieces of flint.

Table 6: Quantification of fired clay

Context/feature	Other datable materials	No	Wt (g)
(527) / pit [528]	late Bronze Age pottery/flint	489	6,945
(559) / pit [530]	late Iron Age/early Roman pottery	1	3
(585) / ditch [669]	late Iron Age/early Roman pottery	3	23
(587) / ditch [669]	late Iron Age/early Roman pottery	2	10
(595) / ditch [596]	late Iron Age/early Roman pottery	1	35
(663) / pit [667]	post-medieval pottery, AD1775–1900	3	60
(678) / pit [679]	late Bronze Age pottery	1	37
(724) / gully [725]	late Bronze Age pottery	3	9
(1005) / ditch [1006]	amongst late Bronze Age clay extraction gullies	1	2
(1040) / ditch [1049]	late Bronze Age pottery	2	9
(1050) / pit [1051]	amongst late Bronze Age clay extraction gullies	647	10,019
(1078) / pit [1080]	amongst late Bronze Age clay extraction gullies	4	28
(1090) / pit [1091]	amongst late Bronze Age clay extraction gullies	1	1
(1098) / ditch [1099]	medieval pottery, AD1250–1325	9	74
(1200) / ditch [1201]	-	1	10
(1204) / ditch [1205]	-	1	1
Totals		1,169	17,266

5.5 Late Iron Age/early Roman pottery by Anna Doherty

A small late Iron Age to early Roman pottery assemblage was largely associated with the boundaries at the north-western extent of the site and in particular with one of the small internal rectangular enclosures and its central pit. The pottery is quantified by fabric type in Table 7.

Almost all sherds assigned to this period are grog-tempered although, in one case, an S-profile jar form was associated with a flint-and-grog fabric (Fig 23, 25). This form could be middle to late Iron Age in date and was from the only group to contain a few flint-tempered sherds along with the grog-tempered wares. However, this ditch also produced a sherd with characteristic late Iron Age furrowed comb decoration. A few sherds in coarse sandy fabrics were residual in medieval gully [629] (Fig 15).

This small assemblage produced four examples of pedestal bases, including one near complete base (Fig 23, 26). This was stratified with a more fragmentary example of the same form from ditch [592], which contained no other pottery (Fig 9). Pedestal jars are one of the most complex wheel-thrown forms and would probably have been seen as a prestigious vessel type (Thompson 1982, 33). They are often associated with high status and do not usually comprise the most common vessel types in settlement assemblages. Their prevalence here appears unusual.

Table 7: Quantification of fabrics from late Iron Age/early Roman contexts

Fabric	Sherds	Weight (g)	ENV	%Sherds	%Weight (g)	%ENV
FLGR1	2	30	1	1.0	2.2	1.7
FLIN1	3	52	4	1.5	3.8	6.8
FLIN2	7	36	7	3.4	2.6	11.9
FLIN3	3	38	3	1.5	2.8	5.1
FLQU1	1	22	1	0.5	1.6	1.7
GROG1	169	968	37	82.8	70.9	62.7
GROG2	15	194	2	7.4	14.2	3.4
QUAR1	4	26	4	2.0	1.9	6.8
Totals	204	1,366	59	100.0	100.0	100.0

Other very fragmentary feature sherds associated with the grog-tempered wares include a bead rim jar, the shoulder of wheel-thrown ripple shouldered vessel and a rim, possibly from a bead and flange bowl similar to a Cam 46 type (Hawkes & Hull 1947).

None of the groups assigned to this period is large or diagnostic enough to date with certainty; however, the small group from ditch [596] is more likely to be of 1st century BC date than later (Fig 9). Pedestal jars are also more characteristic of the earlier part of the late Iron Age although they were also produced the 1st century AD. The sandy fabrics from gully [629] are more typical of conquest period assemblages. Although these do not have the firing characteristics of Roman grey wares, there is some evidence from well stratified deposits in central Canterbury that sandy fabrics are exclusively post-conquest in date (Pollard 1988, 43). The possible Cam 46 bowl is a form which would also usually be considered of post-conquest date (Bidwell & Croom 1999, 470). The absence of other Roman fabrics strongly suggests that activity on site had ceased by cAD50–60, since Roman pottery industries in Canterbury were well established in the pre-Flavian period (*ibid*).

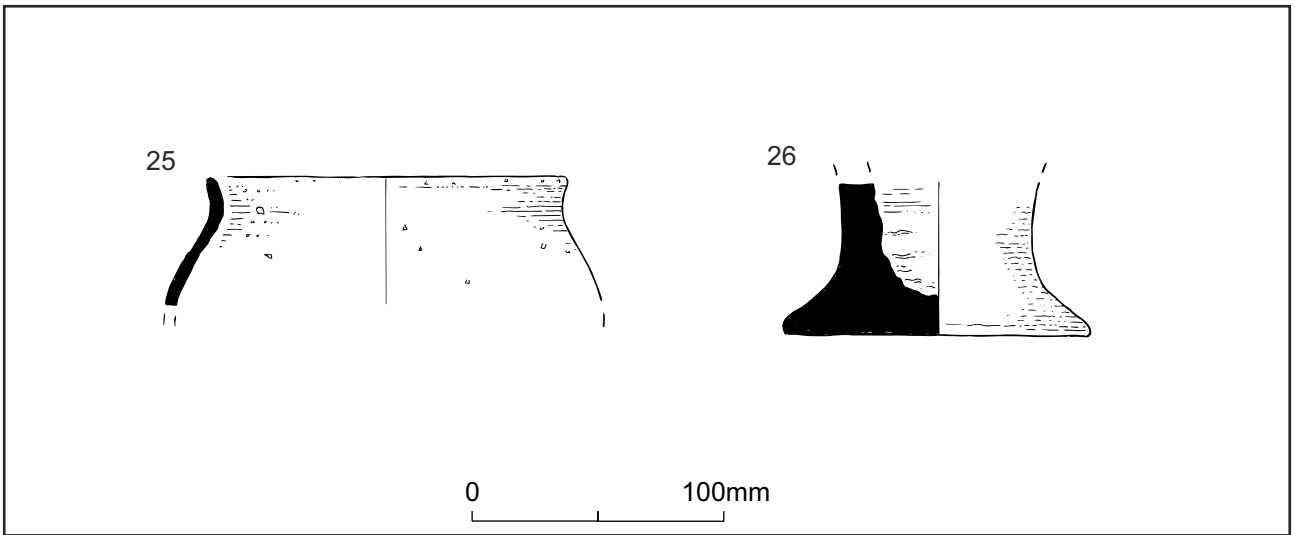
Illustrations

Figure 23

- 25 S-profile jar; fabric FLGR1, fill (595), ditch [596]
 26 Near complete base from pedestal jar; fabric GROG1, fill (591), ditch [592]

5.6 Late Iron Age and Roman finds by Tora Hylton

With the exception an Iron nail of indeterminate form recovered from ditch [890] (Fig 11), the only object stylistically datable to the Roman period is a sherd of blue-green vessel glass recovered from ditch [1101] and is probably intrusive to the clay extraction gullies (Fig 6). The fragment represents part of an angular handle from a bottle, the lower part of the handle is distinctive and has close set vertical ribs which have been pulled into points on top of the body (Price and Cottam 1998, fig 2.5). This distinctive feature is common bottles dating to the 1st–2nd centuries AD.



Scale 1:3

Late Iron Age/ early Roman Pottery, 25-26 Fig 23

5.7 Roman ceramic tile by Pat Chapman

There are 11 tile fragments, weighing 2.09kg. Seven sherds come from topsoil and subsoil; two are from redeposited layer (829), north of the farm (Fig 5). Amongst these, two *tegulae* sherds are 18–20mm thick, the flanges having flat tops, and are made from hard fine orange sandy clay. There are three body sherds, 20mm thick, one made in fine sandy orange clay and two made from hard brown sandy clay. Two floor tile fragments are 40mm thick and also made from fine sandy orange clay. These are randomly scattered residual Roman tiles. Two other tile fragments come from the surface of pit [1040] and ditch [1099], which appear intrusive in the area of late Bronze Age clay extraction gullies (Fig 6).

5.8 Saxon, medieval and later pottery by Luke Barber

There are 683 sherds of post-Roman pottery, weighing 4.97kg, from 37 individual contexts. At least 104 different vessels are represented. The overall assemblage is of variable condition with sherd sizes that range from small (<30mm across) to medium sized (30–50mm across), although the majority are small. Most sherds appear to have been affected by slightly acidic burial conditions and in addition they show clear signs of moderate to heavy abrasion. It is likely the pottery experienced a period of exposure prior to burial and/or a significant degree of reworking. However, despite the generally poor condition of the pottery, most context groups do not appear to contain significant residual material, although this may be in part due to the relatively short-lived phase of intense occupation. Although a few large context groups are present, most deposits produced only small groups of abraded body sherds, often making close dating difficult.

Table 8: Characterisation of pottery assemblage

Period	No/weight (g)	Average sherd size	% of overall assemblage (by sherd count)	Fabric count	No of pottery contexts
early/middle Saxon 5th to mid 8th centuries AD (EMS fabrics)	14/62g	4.4g	2.0%	local - 1	1
early medieval mid 11th to early/mid 13th centuries AD (EM fabrics)	55/373g	6.8g	8.1%	local - 2	1
medieval early/mid 13th to mid/late 14th centuries AD (M fabrics)	606/4444g	7.3g	88.7%	local – 2 regional - 1	29
early post-medieval mid 16th to mid 18th centuries AD (PM fabrics)	1/11g	11.0g	0.1%	imported - 1	0
late post-medieval mid/late 18th to 19th centuries AD (LPM fabrics)	7/82g	11.7g	1.0%	local – 1 regional - 5	6

Totals include all residual/intrusive and unstratified material; local fabrics equate to Kentish ware; regional fabrics equate to other English wares

The pottery contains a wide chronological range of material, the earliest of which may be of mid–late 6th century in date. However, there is not a continuous chronological sequence of ceramics and there are notable gaps between the 8th–12th centuries, and between the mid 14th and mid 18th centuries. The assemblage is characterised in Table 8. This table is based on the date of the pottery itself, whether intrusive, residual or contemporary with the context in which it was found. The divisions are based on the Canterbury Archaeological Trust post-Roman pottery fabric types and give a fairly accurate breakdown, although it should be noted that some fabrics do cross chronological boundaries. The assemblage was fully quantified by fabric on an Excel database for archive. The Canterbury fabrics have been described in detail elsewhere and as such only common names are given in the current report (Cotter 2001; Cotter 2006). The features are identified on Figure 14 and its insert.

Early/middle Saxon, 5th to mid 8th centuries AD

The upper fill of pit [581] was the only deposit to produce pottery of this date. The assemblage consists of 14 small to medium sized conjoining sherds from a jar with simple everted rim in an organic tempered fabric with sparse/common medium quartz grains (EMS4). The organic tempered wares at Canterbury are noted for the variability of their quartz sand content (Macpherson-Grant 1995, 822), although whether this variability is chronologically significant is not yet established with certainty. The simple form is easily matched by a number of jars from the Marlowe Theatre, Canterbury (Macpherson-Grant 1995, 844, no 92). In isolation only a wide mid–late 6th to early 8th century date bracket can be safely given for this vessel, although a 7th century date is suspected. Unfortunately little can be said regarding the nature of its deposition.

Early/mid 13th centuries AD

This assemblage is characterised by small sherds with moderate to heavy signs of abrasion. The assemblage is perhaps somewhat misleading in that all of the material belongs to the very end of the early medieval ceramic tradition and much was probably in contemporaneous use with the medieval material in the second quarter of the 13th century. There is no pottery that appears to be of the 12th century and it is suspected medieval occupation at the site dates from AD1225 onwards. A single feature produced pottery that may be solely of the first half of the 13th century. Ditch [950] contained two reduced sherds from different cooking pots with spots of unintentional external green glaze. The firing of these sandy wares suggests they are either of late Canterbury Sandy Ware or early Tyler Hill Sandy Ware. The bulk of the early medieval assemblage is composed of shelly-sandy EM3 type sherds. These are of late oxidised orange types and, fittingly, always appear alongside Tyler Hill wares in medieval contexts, albeit usually heavily abraded. As such the EM3 type sherds probably relate to the first half of the 13th century. No feature sherds are present, but all pieces appear to derive from cooking pots with the largest concentration comprising 38 sherds (211g) from an abraded bitone fired vessel from pit [952]. Although there are no shell-dusted sherds, typical of the later 12th to mid 13th centuries, this may be a result of the abrasion of many sherds removing the surface shell. Many such vessels have minimal shell and without it are essentially the same fabrics as Tyler Hill wares.

Medieval, early/mid 13th to mid/late 14th centuries AD

The vast majority of the pottery falls in this period, most notably from about the mid 13th century through to the early/mid 14th century. The pottery is totally dominated by products from the Tyler Hill industry, located just to the north of Canterbury and west of the current site (Spillet *et al* 1942; Cotter 1991). These are present both their main fabric and the slightly coarser type, although the latter is represented by just one

sherd. Together these fabrics make up 99.8% of the assemblage. Dominance of Tyler Hill wares in East Kent is quite common at this time, both close to Canterbury and further afield, but the current assemblage is notably saturated. This is mainly due to the near complete absence of non-local wares; a single probable late London type jug sherd (M5) from gully [940], with incised horizontal line decoration, is the only example. The lack of non-local wares suggests a low social standing as such products would have been easily available in Canterbury. The very close proximity of the Tyler Hill pottery industry to the west probably meant the site's occupants obtained their ceramics direct from the potters.

The vessels make up a typical domestic assemblage. Of the sherds identifiable to form, 367 (60.8% of M1 sherds) are from cooking pots. The pots are typically oxidised orange, though brown and reduced grey. Rims are frequently stabbed and usually of rectangular clubbed forms, occasionally with internal beads, though some later expanded flat-topped types are also present. A few vessels have applied thumbbed vertical clay strips and unintentional spots of clear or green glaze. There is a single example with widely-spaced thumbing on the internal edge of its inturned rectangular clubbed rim from pit [956] but decoration is otherwise absent. Bowls/pans (2.8% of M1 sherds) are also well represented and, judging from the quantity with external sooting, they are further cooking vessels. Rim forms are similar to those noted for cooking pots with stabbing being quite common, and one vessel having finger-tip decoration around the top of the rim. One bowl also has a green glazed internal base from ditch [954]. The only other definite cooking form is represented by the socketed handle from a frying pan with applied thumbbed strip around its rim from layer (936). Jug sherds make up 11.9% of the total M1 assemblage. Most are oxidised brown to orange but reduced examples are also represented. Jugs have a variety of rim types and there are examples of both rod and strap handles. On the whole decoration is rare although most vessels have thin and patchy clear or green glazes on the upper portions of their bodies. A few have applied thumbbed strips and thumbbed bases and there is a scatter of sherds with incised line decoration (of various types) and crudely applied white slip lines or patches. No highly decorated pieces are present and these sherds are very much in keeping with the more utilitarian range of products from Tyler Hill. The only other form noted is represented by the unglazed oxidised base of a probable bottle or small jug from ditch [954].

A number of contexts produced sizeable assemblages of medieval pottery. The largest was recovered from pit [952], which contained 225 sherds (1.29kg). This assemblage is characterised by small and abraded sherds, with the average sherd weighing 5.7g. Apart from 38 sherds from a single EM3 type cooking pot, all vessels are of M1 Tyler Hill ware. Only cooking pots (at least six vessels) and decorated jugs (at least four vessels) are represented. The latter include examples with white slipped lines, applied thumbbed strips, vertical combing and horizontal incised line decoration under clear or green patchy glazing. As a whole the group would be in keeping with the later 13th to early 14th centuries.

Ditch [954] produced 98 sherds, weighing 765g, giving a larger average sherd weight of 7.8g. The material is still notably abraded and of a general small size suggesting this too was subjected to surface weathering and/or reworking. The whole assemblage is composed of M1 Tyler Hill wares; cooking pots (at least 4 vessels), bowls (at least 2 vessels), jugs (at least 2 vessels) and a probable bottle. The jugs are very simple with a thumbbed base and applied thumbbed vertical strip being the only feature sherds.

Pit [956] produced 106 sherds, weighing 923g, all of which are from one of four cooking pots. Three of these are represented by single abraded sherds, but the fourth has 103 badly fragmented sherds. The latter vessel is notably well fired and reduced.

It has a stabbed inturned rectangular club rim with wide-spaced thumbing on its interior edge and applied thumbed strips on its exterior body. Although the higher firing suggests a 14th century date it may be a well-fired later 13th century piece.

Although by no means the largest, the most representative assemblage of the medieval period was recovered from layer (936). The 69 sherds weigh 860g and are notably less abraded than the others on site, a fact correlating with the larger average sherd size of 12.5g. The material would thus appear to have been subjected to less weathering or reworking and offers a more reliable group (Table 9). Considering the firing of the vessels the assemblage dates between cAD1275/1300 and 1350.

Table 9: Summary of the M1 pottery fabrics from layer (936)

Form	Decoration	Sherd count	Weight (g)	ENV
?	-	43	234	0
Jug	Green glazed patches	11	72	2
Bowl/pan	Stabbed rim	7	229	7
Cooking pot	X1 applied thumbed vertical strip, stabbed rims	7	155	4
Frying pan	Applied strip around rim	1	170	1

Although a number of the better fired vessels in the medieval assemblage may be as late as the mid 14th century, there is a complete absence of the notably harder fired vessels that become common from the Tyler Hill industry, 1350–1375. As such it would appear that activity ceased abruptly around the middle of the 14th century.

Early post-medieval, early/mid 16th to mid 18th centuries AD

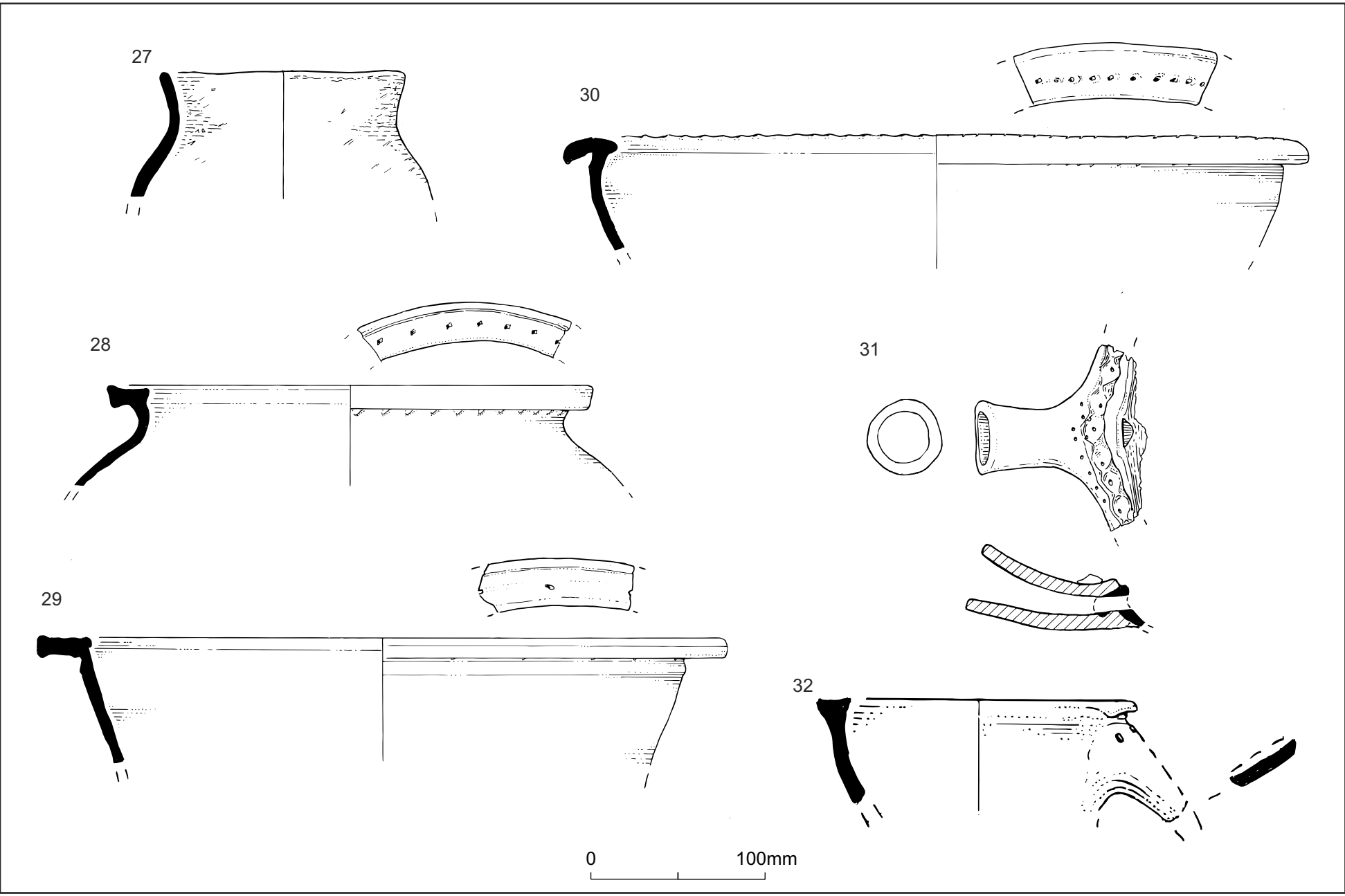
A single sherd from an imported Frechen stoneware bottle is the only early post-medieval pottery in the assemblage and was residual in the subsoil.

Late post-medieval, mid 18th to 19th centuries AD

The small assemblage of late post-medieval pottery indicates negligible activity in the earlier part of the period. The earliest pottery is a 5g fragment from a creamware plate and a 6g fragment from a pearlware plate with transfer-printed Chinese landscape from pit [576] (Fig 17), dating 1775–1825. The remaining sherds that are from within the farmyard and surrounding ditches are in keeping with a mid 19th to early 20th-century assemblage and include a scatter of English stoneware, porcelain, refined white earthenware and unglazed red earthenwares (flower pots) from several features and layers associated with the former Shelford Farm. Although activity at this time had obviously increased from the preceding period, refuse was probably removed from the farm and disposed of elsewhere.

Scale 1:3

M1 Tyler Hill ware from layer (936). 27-32 Fig 24



Illustrations*Figure 24, M1 Tyler Hill ware from layer (936)*

- 27 Jar with simple everted rim, grey/black core with black inner and patchy grey brown to dull orange exterior surfaces, wiped but unburnished surfaces, EMS4
- 28 Cooking pot with rectangular stabbed club rim, mid grey core with dull orange inner and orange grey outer surfaces
- 29 Bowl with expanded horizontal-topped stabbed rim, mid grey core with brown grey interior and patchy brown grey to dull orange exterior surfaces
- 30 Bowl with stabbed curving downturned expanded rim, mid grey core with dull orange interior and orange/grey exterior surfaces
- 31 Socketed handle from frying pan with applied thumbed strip around its rim and stabbing at junction of handle and body, mid/dark grey core with dull orange surfaces
- 32 Jug with slightly bevelled rim and stub of stabbed narrow strap handle, mid grey core with dull orange surfaces, no trace of glazing on the surviving piece

5.9 Medieval brick and tile by Pat Chapman**Brick**

Of the seven bricks, only two have measurable dimensions, the remainder are fragments. The ends of two handmade bricks come from pit [667] (Fig 17). One is 110mm wide by 55mm thick ($4\frac{1}{8} \times 2\frac{1}{8}$ inches), made from dark red friable sandy clay that was fired to hard grey at one header end, probably for decorative purposes. The other brick is wedge-shaped, 82–110mm and 50mm thick ($3\frac{1}{4} \times 2\frac{1}{8}$ and 2 inches thick), made from dense heavy slightly friable fine silty sandy clay with occasional chunks of flint up to 12mm long. The wedge-shaped brick could be from a window or door segmental arch. Four fragments are made from slightly friable dark red clay and one from fine sandy orange clay.

Roof tile

This assemblage of 69 roof tiles weighs 2.54kg. About half, 32 sherds, come from layer (829), which is dated by pottery to cAD1250–1325, but is thought to have been redeposited (Fig 5). The sherds are small, on average 40x40mm, and typically 9–12mm thick, with a few exceptions up to 15mm. The fabric ranges from fine sandy orange clay to coarse sandy red-brown and brown, with one overfired to purple-black, possibly for decorative purposes. There is an occasional fine silty fabric. A few tiles have black surfaces. One sherd from pit [667] has a remnant peghole, 10mm square, which is probably post-medieval (Fig 17). Two joining sherds from pit [952] are green-glazed and certainly fit alongside the pottery dated AD1250–1325. The small size of the sherds scattered across 17 other contexts, however, indicates a general residual scatter elsewhere.

Floor tile

Two of the three sherds come from ditch [705] (Fig 15). They are 28mm thick, one made from fine sandy orange-brown and grey clay and one from coarse dark red sandy clay with a black surface. The other floor tile sherd is 30mm thick, made from sandy orange clay with a broad pale grey core and comes from ditch [1008], intrusive amongst the late Bronze Age gullies (Fig 6).

5.10 Quernstone by Andy Chapman

Seventy-six fragments of lava quern, weighing 1,764kg, were recovered from redeposited layer (829) (Fig 5). The assemblage consists of small-eroded pieces which measure <50mm in diameter and display few diagnostic features. Twelve fragments retain vestiges of the original worn surface and one fragment retains part of a square-socket. The lava is grey and vesicular and is most probably from the Mayen-Niedermendig area of Eiffel in Germany. It was traded in large quantities during the Roman and Saxon periods, declining after the Norman Conquest, although alternative sources have been suggested (Wright 1992, 72–73).

5.11 Other finds by Tora Hylton

Finds of post-Roman date include an Iron sickle and a small assemblage of glass. The sickle would have been used for the harvesting of cereals and was recovered from post-medieval ditch [503] (Fig 17). It has a long sweeping crescent-shaped blade which extends beyond the line of the handle. The blade has a broad triangular cross-section. Typologically this style of sickle represents a form that would have been in use since the Roman period and is not especially diagnostic.

6 THE ENVIRONMENTAL EVIDENCE**6.1 Plant macrofossil remains** by Val Fryer

Although a number of archaeological features were recorded, the area appeared to have suffered considerable disturbance, both in antiquity and more recently. Only very rarely was it possible to date the excavated features with any particular confidence. The issue of dating was, perhaps, best illustrated by the radiocarbon dates recorded from charcoal noted within a number of pit fills. Although the form of the features, their stratigraphic position and the artefactual evidence suggested that many pits were likely to be of prehistoric date, several calibrated dates were much more recent, strongly suggesting that the features had undergone severe post-depositional disturbance. Results from the environmental samples should therefore be treated with caution. Notwithstanding this, samples for the retrieval of the plant macrofossil assemblages were taken, and a total of fifty one were examined.

The samples were bulk floated using standard methods by NA and the flots were collected in a 500 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x16 and the plant macrofossils and other remains are listed in Tables 1–5. Nomenclature within the tables follows Stace (1997) and identifications were made by comparison with modern reference specimens. All plant macrofossil remains were charred, but modern roots, seeds, fungal sclerotia and arthropod remains were also recorded. As the assemblages were generally sparse (<100 specimens excluding charcoal), and as contamination was a potential issue, full quantification was not undertaken. However, the density of material is expressed in the tables as follows: x = 1-10 specimens, xx = 11-50 specimens, xxx = 51-100 specimens and xxxx = 100+ specimens. Other abbreviations used in the tables: cf = compare, fg = fragment, b = burnt.

Sample composition

Although many samples contained moderate to high densities of charcoal/charred wood, other macrofossils were generally very scarce; cereals and seeds occurred mainly as single specimens within only 43% of the assemblages studied. Preservation of the remains was generally poor, and many were fragmentary, probably as a result of damage caused by the disturbance of the deposits.

Possible oat, barley, rye and wheat grains were noted, although most cereals could not be closely identified because of their condition. Only one chaff element, a spelt wheat glume base, was recorded from the fill of late Bronze Age pit [566] (Fig 6; sample 31). Somewhat unusually, the assemblage from late Bronze Age pit [528] (sample 22) contained a high density of cereals, although most grains were severely puffed and distorted, probably as a result of combustion at very high temperatures.

Weed seeds were particularly sparse, and again, most were very poorly preserved. Grasses and grassland herbs were predominant, and the taxa included ribwort plantain, medick/clover/trefoil, buttercup and dock. A small number of seeds of more typical field weeds were also recorded, including specimens of stinking mayweed and brome. A single possible fragment of hazel nutshell was found in the assemblage from undated pit [844] (Fig 5; sample 54).

Although charcoal/charred wood fragments were present throughout, fourteen assemblages were unusually large (>0.5 litres in volume) and almost entirely charcoal dominant. Possible reasons for this will be discussed below. Other plant macrofossils were generally scarce, although occasional pieces of root/stem were noted along with indeterminate buds, culm nodes, fruit stone fragments, seeds and tubers.

Other remains occurred infrequently. The appearance of black porous and cokey residues suggested that these, along with the vitreous globules, were mostly derived from the combustion of organic materials at very high temperatures. Small pieces of coal dust were noted within 11 assemblages, which are intrusive from the use of steam driven agricultural machinery on the former farm.

Table 10: Quantification of plant macrofossils from late Bronze Age features

Sample no.	22	23	24	30	31	32	33
Fill	(527)	(527)	(527)	(678)	(565)	(582)	(583)
Cut	[528]	[528]	[528]	[679]	[566]	[584]	[584]
Feature type	pit	pit	pit	pit	pit	pit	pit
Cereals							
Barley (grains)	x	-	-	-	-	-	-
Wheat (grains)	xx	-	x	-	-	x	-
Spelt wheat (glume base)	-	-	-	-	x	-	-
Other cereals (grains)	xxxx	-	x	-	-	-	-
Herbs							
Brome	-	-	-	-	-	x	x
Large grasses	x	-	-	-	-	-	x
Other plant macrofossils							
Charcoal <2mm	xxx	-	xxx	x	x	x	x
Charcoal >2mm	xxx	x	x	x	-	x	xx
Charcoal >5mm	xxx	-	xx	-	-	-	xx
Charcoal >10mm	xx	-	-	-	-	-	-
Charred root/stem	-	-	-	-	-	-	-
Indeterminate seeds	-	-	x	-	x	-	-
Other remains							
Black porous 'cokey' material	xx	-	x	-	-	-	-
Black tarry material	-	-	x	-	x	-	x
Burnt/fired clay	x	-	-	-	-	-	-
Vitreous material	x	-	x	-	-	-	-
Sample volume (litres)	40	40	40	40	40	40	40
Volume of flot (litres)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
% flot sorted	100%	100%	100%	100%	100%	100%	100%

Table 11: Quantification of plant macrofossils from possible middle Saxon oven and pits, PG1

Sample no.	40	42	43	44	48	49	50	41	45	47
Fill	(806)	(810)	(820)	(812)	(822)	(823)	(826)	(808)	(816)	(814)
Cut	[805]	[809]	[809]	[811]	[821]	[821]	[825]	[807]	[815]	[813]
Feature type	pit	oven	oven	slot	pit	pit	flue	pit	ph	pit
Charcoal										
Charcoal <2mm	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Charcoal >2mm	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Charcoal >5mm	xxx	xxxx	xxxx	xx	xxx	xxx	xxx	xxx	xx	xxx
Charcoal >10mm	xx	-	xxx	-	x	x	-	-	x	-
Charred root/stem	-	-	-	-	x	-	-	-	-	-
Indeterminate bud	-	-	-	-	-	-	-	x	-	-
Other remains										
Black porous 'cokey' material	-	-	-	-	x	x	-	x	x	x
Black tarry material	-	-	-	-	x	x	-	x	x	x
Sample volume (litres)	30	40	30	10	40	10	20	20	5	12
Volume of flot (litres)	1.4	2	2.6	0.4	1	0.3	0.8	0.8	0.1	0.7
% flot sorted	<10%	<10%	<10%	25%	c10%	50%	12.5%	12.5%	100%	12.5%

Table 12: Quantification of plant macrofossils from late Iron Age/early Roman features

Sample no.	17	18	20	27	28
Fill	(529)	(587)	(590)	(626)	(559)
Cut	[530]	[669]	[592]	[627]	[560]
Feature type	pit	ditch	ditch	ditch	ditch
Cereals					
Barley (grains)	x	-	-	-	-
Wheat (grains)	-	x	-	-	-
Spelt wheat (glume base)	-	-	-	-	-
Other cereals (grains)	-	xcffg	-	-	x
Herbs					
Brome	-	-	-	-	-
Large grasses	-	-	-	-	-
Other plant macrofossils					
Charcoal <2mm	xxxx	xxx	xxxx	xx	xx
Charcoal >2mm	xxxx	x	xxxx	xx	-
Charcoal >5mm	xxx	-	xxx	xx	-
Charcoal >10mm	xx	-	x	-	-
Charred root/stem	x	-	x	-	-
Indeterminate seeds	-	x	x	-	-
Other remains					
Black porous 'cokey' material	x	-	-	x	-
Black tarry material	x	-	-	x	-
Burnt/fired clay	-	-	-	-	-
Vitreous material	-	-	-	-	-
Sample volume (litres)	40	40	40	40	40
Volume of flot (litres)	0.3	<0.1	0.1	<0.1	<0.1
% flot sorted	50%	100%	100%	100%	100%

Table 13: Quantification of plant macrofossils from medieval features

Sample no.	21	25
Fill	(618)	(628)
Cut	[619]	[629]
Feature type	ditch	gully
Period	medieval	medieval
Cereals		
Oat (grain)	-	xcf
Rye (grain)	-	xcf
Wheat (grain)	-	x
Other cereals (grains)	-	x
Herbs		
Small grasses	-	-
Large grasses	-	x
Dock/sorrel	-	-
Other plant macrofossils		
Charcoal <2mm	x	xx
Charcoal >2mm	xx	xx
Charcoal >5mm	x	-
Charcoal >10mm	-	-
Charred root/stem	-	-
Other remains		
Black porous 'cokey' material	-	x
Black tarry material	-	x
Burnt stone	-	-
Sample volume (litres)	40	20
Volume of flot (litres)	<0.1	<0.1
% flot sorted	100%	100%

Discussion

The samples have been broadly categorised by period, few of the features were well dated, either typologically or by artefact association. In addition, the fact that the deposits appear to have suffered a high degree of post-depositional disturbance meant that in most instances, the dating remains very approximate. Although this makes a full discussion of the prehistoric assemblages problematic, certain key aspects are worth noting.

Late Bronze Age deposits

The features which appear to be most securely dated are the pit and ditch fills of late Bronze Age features (Table 10). Although sparse, cereals and/or seeds are present within all but two assemblages, and the material is largely typical of scattered refuse of possible domestic/agricultural origin. The assemblage from pit [528] is of especial note because of the density of cereal grains. This may represent a small deposit of hearth waste or burnt storage detritus, but there is currently little to corroborate either hypothesis.

Possible middle Saxon oven and pits, PG1

The pits, hearths/ovens and slots within PG1 (Table 11) contained considerable burnt flint (Table 12). The assemblages are large, 0.3–2.6 litres in volume, and are almost entirely composed of charcoal/charred wood fragments, some of which have a distinct flaked appearance indicative of high temperatures of combustion. All of these assemblages contain splinters of heat affected flint. How the hearths/ovens and associated features functioned is currently unknown, but there is little doubt that they were fired to a very high temperature on at least one occasion.

Charcoal-rich pits spanning the 7th–12th centuries

Many assemblages from these pits scattered isolated pits are undated. Their quantification is presented in more detail in Tables 14–15 as they are very similar in composition and almost entirely composed of charcoal, unfortunately their spatial distribution is so widely separated that they are unlikely to have a common source (Fig 14). None of these pits produced charred seeds of significance.

Three assemblages from pits [854], [856] and [860] (samples 55–57) are from features that displayed clear signs of *in-situ* firing. When and why this firing occurred is unknown, but very similar features with charcoal-rich fills have recently been recorded from Foxhall, Ipswich (Fryer 2012a) and from Old Catton, Norwich (Fryer 2012b). In these instances, however, the contexts were of late Iron Age to early Roman date.

Medieval deposits

Ditch [619] and gully [629] both contained pottery of 13th–14th century date (Table 13), but as with all of the medieval ditches, the plant macrofossil assemblages are very sparse, with none of them containing a sufficient density of material for firm interpretation. Given the period of land use and the lack of cultivation scars it is possible that these few macrofossils derive from wind-blown animal fodder, rather than a crop regime.

Conclusions

The assemblages are difficult to interpret with any certainty. In many instances, large quantities of spent fuel in the form of charcoal/charred wood were deposited within pits, and yet the precise taphonomy of these assemblages remains unclear. The low density of cereals, chaff, seeds and other items of refuse indicate that all but a few of the recorded features were entirely peripheral to any foci of domestic and/or arable activity. The widely distributed spatial locations of each charcoal-rich pit also indicates that their purpose had no focal point and the most plausible explanation is that each deposit represents an independent burning event which comes from a small scale fire, either for clearance or for charcoal burning. Such activity would not have been confined to a single period of the archaeological record and it is notable that such deposits do not occur after the Saxon period, by which time the hilltop had probably been cleared for pasture.

6.2 Charcoal by Imogen van Bergen

There were 96 samples of charcoalified wood, which were assessed for preservation, taxonomic diversity, exposure temperature and environmental indicators at the site. The samples come from 47 contexts, ranging in size from shards of <3mm to blocks that were sometimes >10mm. From each context, unless the number of fragments dictated otherwise, a random selection of at least 20 fragments (>3mm diameter when possible) were studied. Charcoalified fragments were prepared using standard methods (Gale and Cutler 2000). Anatomical structures were examined using reflected light on an Olympus BX41 compound microscope with magnifications up to x200.

Table 14: Summary of the taxonomic identity of the charcoal

Family	Genus and species	Common name	Bronze Age*	Other*
Betulaceae	<i>Corylus avellana</i>	hazel	-	√
	<i>Quercus</i> sp.	oak	√	√
	<i>Quercus/Castanea</i> sp.	oak/sweet chestnut	√	√
Celastraceae	<i>Euonymus europaeus</i>	spindle	-	√
Oleaceae	<i>Fraxinus excelsior</i>	ash	(√)	√
Rosaceae	<i>Prunus</i> sp.	cherry/blackthorn	-	√
	Maloideae	hawthorn etc.	√	-
Sapindaceae	<i>Acer campestre</i>	field maple	√	√

Familial classification follows that of the Angiosperm Phylogeny Group (2009)

Material was identified with the aid of relevant literature (Schweingruber 1990; Gale and Cutler 2000). It must be noted that wood anatomy alone is often not enough to secure identification to individual species and thus the samples have been identified to generic level only unless only one native species exists in the British flora. Whenever possible the maturity of the wood (twigs, heartwood or roundwood) was assessed.

Fragments from each sample were grouped according to taxon and assigned an arbitrary number (Table 14) to facilitate future reference. If there was some degree of doubt regarding taxonomic identity the number is preceded by a question mark. All fragments were handled using tweezers to minimise carbon contamination and like-fragments were placed in separate aluminium foil envelopes and labelled. Samples considered suitable for radiocarbon dating such as short-lived taxa or fragments representing short-lived twig material or sapwood from long-lived taxa were isolated and wrapped separately.

Results

The fragments all showed evidence of either rounding or are shards (often <3mm in size), which indicates that they have been subject to weathering or abrasion after burning. The presence of orange staining on a number of fragments indicates the presence of oxidised sand particles in anaerobic (e.g. waterlogged) conditions and later to aerobic conditions, indicating fluctuation of the burial conditions.

Preservation was generally good with some fragments exhibiting well-preserved anatomy and good reflectivity whilst others showed evidence of distorted anatomy, homogenised cell walls and high reflectivity suggesting that many of the fragments were subject to exposure temperatures >500°C (Braadbaart and Poole 2008). A summary of the taxonomic finds from all the contexts are provided in Table 14, whilst Table 15 provides the details of all fragments studied from each context at this site.

The charcoalified and charred material was derived from features found at the site from late Bronze Age, late Iron Age to early Roman, Saxon and medieval periods.

Table 15: Summary of the charcoalfied wood fragments

Context	Sample	Taxonomic status	Total number of fragments	Notes
(512) pit [514] undated	11	<i>Quercus</i>	15	heartwood
		unidentifiable plant material	4	preservation
		root	1	pith and cortex present
(513) pit [514] undated	12	unidentifiable plant material	2	high reflectivity, homogenous walls
		<i>Quercus</i>	38	heartwood, distorted anatomy
		dicot twig	1	pith and cortex present
(527) pit [528] late Bronze Age	22	? <i>Fraxinus</i>	1	
		<i>Quercus/Castanea</i>	1	
		unidentifiable	26	
		unidentifiable dicot	10	small size, poor preservation
		<i>Quercus</i> twig	4	cortex and pith preserved
(529), pit [530] LIA/Roman	17	<i>Quercus</i>	36	distorted anatomy
		unidentifiable	4	poor preservation
(543) pit [544] undated	16	unidentifiable	21	poor preservation, small size
		<i>Quercus</i>	24	heartwood
		unidentifiable wood material not <i>Quercus</i>	13	poor preservation, homogenised anatomy
		? <i>Quercus</i>	2	poor preservation

SHELFORD FARM LANDFILL, CANTERBURY

Context	Sample	Taxonomic status	Total number of fragments	Notes
(583)	33	<i>Acer</i>	6	
pit [584]		<i>Quercus</i>	2	
late Bronze Age		unidentifiable	10	
		Maloideae	1	
		unidentifiable not wood	1	
(588)	19	<i>Quercus</i>	26	homogenised and distorted anatomy, high reflectivity
pit [589]		unidentifiable	10	
undated		rootlet	1	
		<i>Quercus</i> twig	1	homogenised and distorted anatomy, high reflectivity
		? <i>Quercus</i>	7	
(590)	20	unidentifiable	11	homogenised and distorted anatomy, high reflectivity
ditch [592]		<i>Quercus</i>	8	
LIA/Roman		unidentifiable dicot	1	roundwood
(600)	26	<i>Quercus</i>	21	heartwood, distorted anatomy
pit [601]		unidentifiable	21	small size, poor preservation
undated		rootlet	1	cortex present
(614), ditch [615]	21	<i>Quercus</i>	7	
medieval		? <i>Quercus</i>	7	preservation
(626)	27	<i>Acer</i>	10	roundwood
ditch [627]		? <i>Acer</i>	5	twig wood
LIA/Roman		unidentifiable (? <i>Acer</i>)	4	
		<i>Euonymus</i>	1	
		<i>Prunus</i>	1	

SHELFORD FARM LANDFILL, CANTERBURY

Context	Sample	Taxonomic status	Total number of fragments	Notes
(806) pit [805] middle Saxon	40	<i>Quercus</i>	30	heartwood, distorted anatomy, high reflectivity
		? <i>Quercus</i>	10	poor preservation, distorted anatomy
		unidentifiable	7	poor preservation, homogenised anatomy, high reflectivity
		? <i>Quercus</i> twig	2	high reflectivity, distorted anatomy
(808) pit [807] middle Saxon	41	<i>Quercus</i>	35	heartwood; high reflectivity, distorted anatomy
		<i>Quercus</i> rootlet	1	
		unidentifiable	3	poor preservation
		? <i>Quercus</i>	1	
(810), oven [809] middle Saxon	42	unidentifiable	20	distorted anatomy, poor preservation
		<i>Quercus</i>	60	heartwood; high reflectivity, distorted anatomy
(812), slot [811] middle Saxon	44	<i>Quercus</i>	17	
		unidentifiable	3	
(814), posthole [813] middle Saxon	47	? <i>Quercus</i>	23	poor preservation, small size, friable, distorted anatomy
		<i>Quercus</i>	17	
(816), posthole [815] middle Saxon	45	? <i>Quercus</i>	9	poor preservation, distorted anatomy
		<i>Quercus</i>	11	
(820) oven [809] middle Saxon	43	<i>Quercus</i>	67	heartwood high reflectivity, distorted and homogenised anatomy
		unidentifiable	49	poor preservation, homogenised anatomy, high reflectivity
		? <i>Quercus</i>	13	
(822) pit [821] middle Saxon	48	<i>Quercus</i>	17	heartwood; high reflectivity,
		? <i>Quercus</i>	23	small size
		unidentifiable	20	poor preservation, high reflectivity, distorted anatomy
		<i>Fraxinus</i>	1	

SHELFORD FARM LANDFILL, CANTERBURY

Context	Sample	Taxonomic status	Total number of fragments	Notes
(823)	49	<i>Quercus</i>	6	
pit [821]		? <i>Quercus</i>	12	small size
middle Saxon		unidentifiable	2	
(826)	50	<i>Quercus</i>	11	
pit [825]		? <i>Quercus</i>	17	
?middle Saxon		unidentifiable	12	poor preservation and size
(843)	54	? <i>Quercus</i>	13	includes a bag with a nutshell poor preservation, distorted anatomy
pit [844]		<i>Quercus</i>	68	heartwood, distorted anatomy, high reflectivity
undated		? <i>Quercus</i>	33	size and preservation, homogenised anatomy, high reflectivity
		unidentifiable	16	poor preservation, small size
(853)	55	<i>Quercus</i>	12	some very unreflective, others high reflectance
pit [854]		? <i>Quercus</i>	5	size and preservation
middle Saxon		unidentifiable	4	
(855)	56	unidentifiable	22	homogenised anatomy, high reflectance, poor preservation
pit [856]		? <i>Quercus</i>	24	distorted, high reflectance
undated		<i>Quercus</i> rootlet	1	
		<i>Quercus</i>	13	
(859)	57	<i>Quercus</i>	35	heartwood; orange staining, high reflectivity, distorted anatomy
pit [860]		unidentifiable	28	some ?wood
Norman/early medieval		? <i>Quercus</i>	2	
(1081)	59	<i>Quercus</i>	9	heartwood high reflectivity
pit [1083]		? <i>Quercus</i>	8	high reflectivity
undated		unidentifiable wood	5	poor preservation

SHELFORD FARM LANDFILL, CANTERBURY

Context	Sample	Taxonomic status	Total number of fragments	Notes
(1206) pit [1207] undated	61	<i>Quercus</i>	55	heartwood; high reflectivity, distorted anatomy
		? <i>Quercus</i>	6	poor preservation, small size
		<i>Quercus/Castanea</i>	5	
		rootlet	1	
(1214) pit [1213] undated	62	<i>Quercus</i>	75	heartwood; high reflectivity, distorted anatomy
		unidentifiable	13	poor preservation, high reflectivity
		<i>Quercus</i> twig	1	cortex present
(1802) pit [1800] undated	80	unidentifiable	8	
		? <i>Quercus</i>	24	high reflectivity, homogenous anatomy, small size flakes <3mm, poor preservation
		<i>Quercus</i>	9	high reflectivity, homogenous anatomy
		<i>Quercus</i>	20	heartwood
(1805) pit [1803] undated	81	unidentifiable dicot	27	high reflectivity, homogenous and distorted anatomy, poor preservation
		? <i>Quercus</i>	12	poor preservation
		<i>Quercus</i>	3	heartwood, high reflectivity, homogenous and distorted anatomy,
(1808) pit [1806] middle/late Saxon	83	<i>Quercus</i>	17	heartwood
		unidentifiable	4	poor preservation, small size
		<i>Quercus</i> twig	1	pith present
		unidentifiable dicot	15	
		? <i>Quercus</i>	5	
		rootlet	1	
		dicot twig	1	pith present

SHELFORD FARM LANDFILL, CANTERBURY

Context	Sample	Taxonomic status	Total number of fragments	Notes
(1811)	84	unidentifiable	10	poor preservation
pit [1809]		? <i>Quercus</i>	10	heartwood, powdery preservation
undated		<i>Quercus</i>	6	high reflectivity, homogenous and distorted anatomy
		unidentifiable dicot	34	poor preservation, small size
(1817), pit [1815]	86	unidentifiable	15	poor preservation, small size
undated		<i>Quercus</i>	48	distorted anatomy, poor preservation, small size

Late Bronze Age deposits

Particular reference is made to the fills of pits [544], [528], [584] and [1083]. Pits [528] and [584] contained late Bronze Age pottery and the others were associated by proximity.

The fragments from these contexts showed the greatest range in taxonomic diversity with oak (mainly heartwood) being the most abundant but also included ash, malvoideae and field maple (Table 15). Those fragments recorded as oak/chestnut show the classical features of oak wood but the size and/or preservation has prevented the identification of particular anatomical characteristics that separates it from sweet chestnut. However pollen evidence suggests that the Romans introduced sweet chestnut to the British Isles (Rackham 1990) and therefore since these samples predate the period it is likely that these fragments are oak.

The fragments exhibited homogenised cell walls, high reflectivity, orange staining and a good range in size (3–10mm). Comparison of reflectivity and anatomy suggests that they have been subject to temperatures in the region of 600–800°C (Braadbaart and Poole 2008) although consequent oxidation may have affected the degree of reflectivity and in turn the indications of exposure temperatures (Ascough *et al* 2010).

Possible middle Saxon oven and pits, PG1

Material from PG1, samples 40–50, comprised entirely oak except for one fragment of ash wood. The uncertainty regarding the taxonomic affinity of some of the specimens stemmed from fragment size often being less than the 3–4mm in radial diameter needed to ensure all distinguishing characters could be seen. These uncertain fragments could be chestnut but appears unlikely given the overriding abundance of oak at the site. The fragments may have derived from an oven as the material shows evidence of heating to relatively high temperatures, up to and in excess of 700°C, which is consistent with temperatures found in ovens.

The remaining assemblages

No indications of exact age were available for the remaining samples other than some are associated more closely with late Iron Age/early Roman features. Material suitable for radiocarbon dating was found amongst many of these samples. The majority of the fragments were oak (heartwood), although hazel, spindle, field maple and *Prunus* were also present but in very low abundances. The fragments labelled *Quercus/Castanea* (oak/chestnut) lack the anatomical characters used to distinguish between these two species.

Discussion

Charcoal fragments derived from this site indicate the presence of hazel, oak, spindle, ash, malvoideae and field maple. These taxa are all native to British woodlands. Oak, ash and field maple can all be coppiced to provide abundant material in a short rotation. Both the Saxons and Normans were familiar with this system and planted mixed coppices (Rackham 1990). Oak occurs naturally in Britain but as a component of mixed broad leafed deciduous woodland.

The fires were carefully controlled. Estimated temperatures of exposure in the range of 500–900°C suggest that the fires were of relatively high temperature. Temperatures for domestic fires can reach up to 800°C (Braadbaart and Poole, 2008), exposure time to these high temperatures would be brief. Moreover a domestic fire would probably not leave behind a residue dominated by one taxon.

Prolonged exposure of wood to relatively high temperatures might infer an industrial rather than a domestic use. Wood for charcoal production and tar production for example is heated to between 500–600°C (Armstrong 1978; Braadbaart and Poole 2008). If charcoal (as opposed to wood) was used as the fuel then considerably higher temperatures are possible. This is exploited in fires needed for metallurgic heating when temperatures need to ensure the melting point of the metal is exceeded (>1550°C). Although little ash remains after such fires, there is usually some evidence of charcoal preserving the high reflectivity and anatomical characteristics of having been exposed to temperatures >1000°C. No evidence of these excessive metallurgic fuel temperatures was found from this assessment but does not exclude the potential preparation of charcoal as a commodity.

The preservation appears similar across the samples studied and the overriding abundance of oak recovered from the charcoalified remains suggests that from the late Bronze Age onwards this was deliberately selected as the fuel for its high calorific value. If oak was required in such quantities this taxon may have been selected for this purpose in the local vicinity, which in turn provides an indication of the taxonomic composition of the local woodland bearing in mind that preservational differences bias the archaeobotanical record.

6.3 Radiocarbon determinations

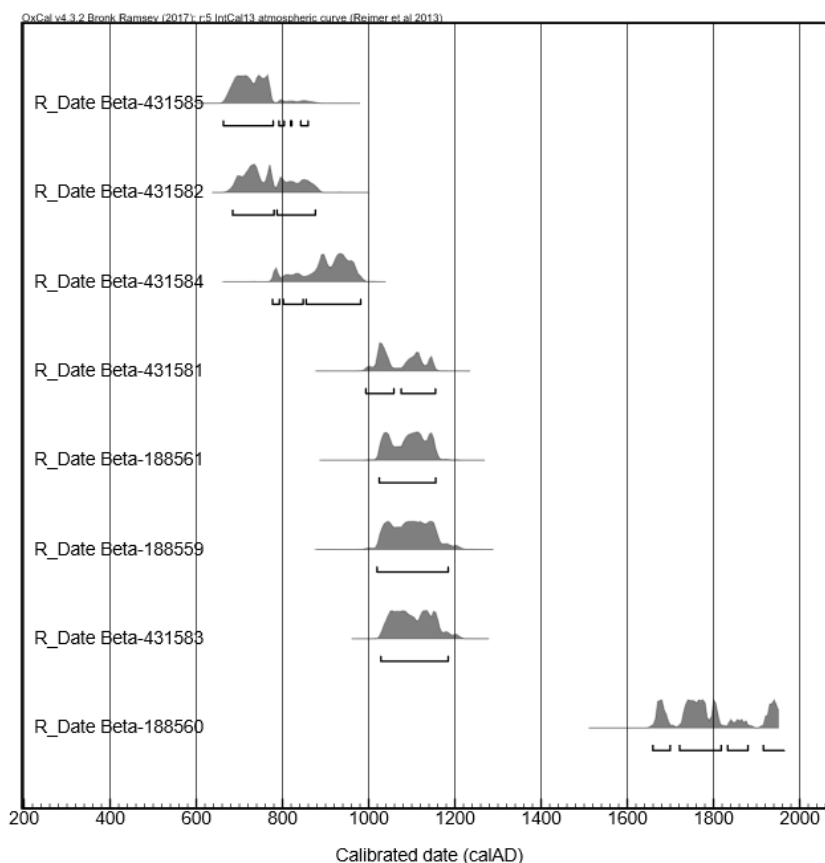
Owing to an abundance of oak charcoal, much of it from heartwood, and a very small selection of other species, many of the specific deposits that might be desirable to date closely would only be datable in broad period terms. Also given the scattered nature of the features and the large number of burnt deposits available, the cost of radiocarbon dating every single example would be prohibitive. With this in mind five deposits were chosen to inform upon the general character of these undated charcoal deposits. Great care was taken to select samples that did not contain evidence of other later intrusive material such as coal fragments, roots or tubers; which unfortunately limited the choice of features that could be confidently chosen.

Oak charcoal from two pits, [854] and [860], was chosen to represent the group of charcoal-rich pits at the north-east end of the site (Fig 5). Their proximity to the 1st–2nd-century boundary features was an awkward coincidence as the ditch fills generally lacked charcoal and it was therefore desirable to confirm the date of at least two of the charcoal-rich pit deposits. One sample was taken from ash roundwood recovered from ditch [592], Enclosure 2, which was the only significant dump of charred material recovered from the boundaries (Fig 9).

One sample was chosen from an oak twig amongst the fuel charcoal of oven [809], contained within PG1 (Fig 12), in order to date and compare this with more distant features.

Of the more widely dispersed pits, pit [1806] was chosen at the top of the slope on the east side of the hill in order to give some chronological context for the scattered fires in this area of the site. Data from three pits analysed for the SEEBOARD Transmission Projects was included from pits [7], [51] and [66], which were all located at the southern end of the utility cable trench at the base of slope by the stream (Fig 1; NGR TR 16592 60221).

The results of the radiocarbon determinations are presented in Table 16 and on Figure 23, which range between the 7th–12th centuries, with one date of post-medieval or modern origin.



Comparison of radiocarbon determinations from selected charcoal-rich pits Fig 25

Table 16: Radiocarbon determinations from selected charcoal-rich pits

Laboratory & sample no.	Context	Sample details	C13/C12	Conventional Radiocarbon Age BP	Cal AD intercept 68% confidence 95% confidence
Beta-431585 SETC04/43	fill (820) oven [809]	charcoal (oak)	-25.8	1270±30	720, 740, 765 685–770 670–775/790–800
Beta-431582 SFB03/55	fill (853) pit [854]	charcoal (oak)	-26.2	1240±30	770 715–745/765–775 680–880
Beta-431584 SFB07/83	fill (1808) pit [1806]	charcoal (oak twig)	-24.6	1140±30	890 780–785/880–900/925–945 775–975
Beta-431581 SFB03/20	fill (590) ditch [592]	charcoal (roundwood)	-26.7	980±30	1025 1020–1040/1110–1115 1015–1050/1080–1150
Beta-188561 SFE03/10	fill (68) pit [66]	charcoal (roundwood)	-24.9	950±40	1040 1025–1160 1005–1185
Beta-188559 SFE03/01	fill (8) pit [7]	charcoal (roundwood)	-27.0	940±40	1040 1025–1160 1010–1195
Beta-431583 SFB03/57	fill (859) pit [860]	charcoal (oak)	-25.0	920±30	1050, 1080, 1150 1040–1160 1025–1190
Beta-188560 SFE03/08	fill (52) pit [51]	charcoal (ash)	-25.2	170±30	1675, 1765, 1800, 1940 1665–1685/1735–1810/1925–950 1660–1700/1720–1820/ 1835–1880/1915–1950

The radiocarbon dates indicate that the charcoal, which is mainly from intense high temperature fires, was burned periodically and that this activity was widely spaced over a period of c500 years. The frequency of burning would appear too low to support a charcoal burning industry, although the product itself was suitable for the purpose of small-scale smelting and metalworking.

7 DISCUSSION

The archaeological investigations undertaken during mitigation works for the extension of the Shelford Farm landfill site identified remains from four distinct and independent archaeological periods. There was no evidence for continuity of occupation between any of the periods.

Possible Bronze Age settlement

Excavations took place immediately adjacent to the site of a previously excavated Bronze Age urned cremation cemetery (CAT 2002b). The cemetery site was bounded on its north and east sides by an enclosure ditch, which could have been a funerary enclosure. Its full circuit was not apparent as it became badly truncated at its southern end. There was an apparent division of the types of features and the nature of their fill deposits between those on the inside of the enclosure reported in 2002, and those beyond its limits.

Many of the pits outside of the possible funerary enclosure contained comparatively large quantities of pottery for the late Bronze Age and this appears unusual if the only occupation of the site was serving a funerary function. At least two of the pits contained large deposits that were rich in charcoal, with a fairly diverse range of taxa and no cremated bone. This indicated that the burnt material did not originate from pyres, but instead derived from large bonfires, which could have a range of potential explanations including clearance, temporary occupation and firing pots. There was no evidence for the cremation process on the site; all *in situ* burning was of later date, and no evidence for the use of clamp kilns except the deposition of large quantities of charcoal and broken pottery. None of the pot sherds were identified as over-fired. Shallow pits were concentrated to the east of the funerary site in an area where the underlying clay was forced up through the gravel along fissures. It is possible the gully-like pits were the product of extracting clay along these bands since the wider distribution had no formal arrangement and appeared to coincide with geological variations. Evidence was absent for posthole structures, which might otherwise have suggested at least semi-permanent occupation.

The ring ditch was the most striking of the late Bronze Age features and has two potential explanations; either it encircled a barrow mound or it contained a roundhouse. The size, almost 30m in diameter, suggests that it would have encircled a round barrow. No evidence remained for a mound or internal burials, as the whole of the monument was so heavily truncated that these would not have survived. Similarly any small features such as postholes were difficult to identify with certainty across the site.

However, the surviving form of the ring ditch suggested that it had been cut and then later redefined; a common occurrence in the vicinity of a roundhouse and less common with funerary monuments. The missing portion on the south-east side made it impossible to determine if an entrance had once been present. The quantity of pottery from the ring ditch (69 sherds, 616g) from only three hand dug sections was also high for a barrow ditch, and it is only the absence of bone survival from the site as a whole that makes it difficult to demonstrate it was domestic waste. Given the non-funerary deposition in nearby pits and the presence of at least one ancillary structure on its

south-west side, there is the possibility that this may have been a ring ditch encircling a roundhouse and that its proportions reflected the importance of the site and its relationship with the funerary site.

Early trackways and field systems

Britain in the 1st–2nd centuries AD had a landscape where there were frequently extensive field systems laid out to serve agricultural settlements of all types from smaller farmsteads to early villa Estates. The occurrence of trackways and boundary ditches is commonplace, although their form is perhaps more interesting.

The alignment of the trackway ditch downslope to the south-east in the direction of a previously excavated early Roman site (TR16 SE88; CAT 2001) is perhaps significant. In the period contemporary with the use of the field systems on the hilltop, there were at least two timber and masonry buildings, metalled yard surfaces and a steamhouse that served the hypocaust heating system. In the late 1st–2nd centuries AD this was a successful and well-to-do establishment.

On top of the hill there may have been a large rectangular enclosure to the west of the trackway. At its north end there was a boundary junction where four principal boundaries met. There was a large entrance way on the north side of the junction between east and west, and a very narrow entrance in the corner between north and south, feeding in or out of the rectangular enclosure. Enclosure 1 appears to have been a small stock pen positioned just inside the larger entranceway and north of the narrow crossing. Smaller ditches at junction crossing appear to channel movement into the narrow crossing point, and adjacent to this is Enclosure 2, perhaps another small stock pen. The form of the boundaries at the junction would make no sense in an arable farming regime, and whilst charred material had survived well elsewhere on site there was no evidence for crop processing or cereal cultivation.

Charcoal production

It was expected that the charcoal-rich pits would derive from one of three distinct and separate periods of activity; a late Bronze Age cremation cemetery, late Iron Age/early Roman field systems, or a probable medieval settlement. The charcoal was examined and the majority of it was oak, comprising substantial logs, although other species were present in low numbers. The extreme heat and temperature of the fires is associated with huge bonfires rather than simple cooking, and it is thought that these fires were deliberately controlled. Oak is known for its high temperature and long slow burning properties and was frequently selected for industrial and funerary processes in many periods. There was no burnt human bone amongst the charcoal to suggest pyre debris despite the prominent hilltop location and proximity to the late Bronze Age cremation cemetery.

Radiocarbon analysis was undertaken for selected samples at different locations (Fig 23, Table 16). These returned middle and late Saxon dates from pits located on the hilltop. Comparison was made with similar charcoal-rich material analysed for the SEEBORD cable route, which was laid alongside the stream at the base of the hill slope (Jones and Yates 2004; Table 16, Sample code SFE03). This charcoal had a similar composition but was slightly later, derived from burning during Norman and early medieval times. The results of this work determined that there was a long period during which the only apparent activity was collection and burning of substantial oak logs; a process that involves woodland management to allow for drying and seasoning of the wood before making it into charcoal. With a general absence of other activity it is possible that this was managed woodland providing a range of coppice and timber, including occasional charcoal production on a localised scale.

A medieval smallholding

In the 13th–14th centuries a substantial midden of domestic waste was deposited over ditches and pits at the southern edge of what was later to become the post-medieval farmyard. All evidence in the vicinity of the farmyard had been swept away by modern agricultural farm buildings and associated services. Much of the pottery was of a utilitarian nature, comprising cooking pots and storage vessels, some of them quite nicely decorated in the popular fashion by local potters known in Canterbury. The latest of these did not post-date the Tyler Hill industry, 1350–1375, which is normally present on the latest medieval sites, and so the smallholding could not have been the forebear of Shelford Farm, which was a much later development.

Adjoining the smallholding were several small enclosures. The purpose of the enclosures is not known, but given the size and extent of the occupancy they are likely to have been a combination of horticultural gardens and paddocks for yard stock. There was no evidence to suggest that the enclosures extended to join a wider field system of any kind or that any form of open field agriculture or grazing may have been operated nearby. It is entirely possible that part of the site may have been partially wooded, especially if this had been the case in previous centuries, and the smallholding may have occupied a cleared area. In the 19th century the site was situated upon a bridle route between Broad Oak and Canterbury that may have been a former medieval road.

BIBLIOGRAPHY

- Andrews, P, Egging Dinwiddy, K, Ellis, C, Hutcheson, A, Phillpotts, C, Powell, A B and Schuster, J, 2009 *Kentish sites and sites of Kent: a miscellany of four archaeological excavations*, Wessex Archaeology Report, **24**
- APG3 2009 An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants, Angiosperm Phylogeny Group III, *Botanical Journal of the Linnean Society*, **161**, 105-121
- Armstrong, L 1978 *Woodcolliers and charcoal burning*, Coach Publishing House, Sussex
- Ascough, P L, Bird, M I, Scott, A C, Collinson, M E, Cohen-Ofri, I, Snape, C E, and Le Manquais, K, 2010 Charcoal reflectance measurements: implications for structural characterization and assessment of diagenetic alteration, *Journal of Archaeological Science*, **37**, 1590-1599
- Barber, L, forthcoming The Post-Roman pottery, in J Rady
- Barber, L, in prep The post-Roman pottery, in S Stevens
- Bennet, P, and Macpherson-Grant, N, 2007 The excavated evidence, in P Bennett *et al*, 11-99
- Bennett, P, Couldrey, P, and Macpherson-Grant, N, 2007 *Highstead, near Chislet, Kent: Excavations 1975-1977*, Canterbury Archaeological Trust
- BGS 2001 *Solid Geology Map: UK South Sheet*, Scale 1:625,000, British Geological Society
- Bidwell, P, and Croom, A, 1999 The Camulodunum/Colchester type-series, in R P Symonds and S Wade 1999, 468-487
- Blockley, K, Blockley, M, Blockley, P, Frere, S, and Stow, S, 1995 *Excavations in the Marlowe Car Park and surrounding areas, Part II: The Finds*, The Archaeology of Canterbury, Old Series Volume, **V**, Canterbury Archaeological Trust
- Boden, D, 2003 *Archaeological Excavation on the site of the Western Attenuation Pond: Stratigraphic report*, Canterbury Archaeological Trust, report **2002/68**
- Boden, D, and Rady, J, 2003 *Archaeological Excavation on the site of Extraction Area 13: Stratigraphic and assessment report*, Canterbury Archaeological Trust, report **2003/6**
- Booth, P, (ed) 2006 *Ceramics from Section 1 of the Channel Tunnel Rail Link, Kent*, CTRL Specialist Report Series, <http://archaeologydataservice.ac.uk/>
- Braadbaart, F, and Poole, I, 2008 Morphological, chemical and physical changes during charcoalification of wood and its relevance to archaeological contexts, *Journal of Archaeological Science*, **35**, 2434-2445
- Brown, J, 2003 *Archaeological mitigation works on the HP Gas pipeline, Shelford Farm Estate, Broad Oak, Canterbury*, Northamptonshire Archaeology report
- Brown, D H, 2011 *Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation. Second edition*, Archaeological Archives Forum
- CAT 1991 *Canterbury's Archaeology 1990-1991*, Canterbury Archaeological Trust Annual Report, Canterbury Archaeological Trust
- CAT 2001 *Canterbury's Archaeology 2000-2001*, Canterbury Archaeological Trust Annual Report, Canterbury Archaeological Trust
- CAT 2002a *Archaeological observations of geotechnical test-pitting at Shelford Farm Estate, Broad Oak Road, Canterbury*, Canterbury Archaeological Trust
- CAT 2002b *Canterbury's Archaeology 2001-2002*, Canterbury Archaeological Trust Annual Report, Canterbury Archaeological Trust
- CAT 2003a *Shelford Farm Estate, Broad Oak, Canterbury, Kent: Archaeological excavation on the site of the Western Attenuation Pond – Stratigraphic report*, Canterbury Archaeological Trust
- CAT 2003b *Canterbury's Archaeology 2002-2003*, Canterbury Archaeological Trust Annual Report, Canterbury Archaeological Trust

- ClfA 2008a *Standard and guidance for an archaeological watching brief*, Chartered Institute for Archaeologists
- ClfA 2008b *Standard and guidance for archaeological field evaluation*, Chartered Institute for Archaeologists
- ClfA 2008c *Standard and guidance for archaeological excavation*, Chartered Institute for Archaeologists
- ClfA 2008d *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*, Chartered Institute for Archaeologists
- ClfA 2010 *Code of Conduct*, Chartered Institute for Archaeologists
- Cotter, J, 1991 The Medieval Pottery and Tile Industry at Tyler Hill, in CAT 1991, 49-56
- Cotter, J, 2001 The Pottery, in M Hicks and A Hicks, 231-266
- Cotter, J, 2006 The Pottery, in K Parfitt *et al*, 121-254
- Couldrey, P, 2007 The late Bronze Age/early Iron Age pottery, in P Bennett *et al*, 101-175
- Egging Dinwiddy, K, and Schuster, J, 2009 Thanet's longest excavation: archaeological investigations along the route of the Wetherlees-Margate-Broadstairs pipeline, in P Andrews *et al*, 85-89
- EH 1991 *Exploring our past*, English Heritage
- EH 1997 *English Heritage Archaeology Division Research Agenda*, English Heritage
- EH 2006 *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers Guide*, English Heritage
- EH 2007 *Understanding the archaeology of landscapes: a guide to good recording practice*, English Heritage
- EH 2008 *Management of Research Projects in the Historic Environment, PPN3: Archaeological Excavation*, English Heritage
- EH 2011 *Environmental Archaeology: A Guide to Theory and Practice for Methods, from sampling to post-excavation*, English Heritage
- Fryer, V, 2012a *An assessment of the charred plant macrofossils and other remains from Foxhall, Ipswich*, Allen Archaeology
- Fryer, V, 2012b *An assessment of the charred plant macrofossils and other remains from Spixworth Road North, Old Catton, Norwich*, Pre-Construct Archaeology
- Gale, R, and Cutler, D, 2000 *Plants in Archaeology*, Royal Botanic Gardens, Kew, London
- Hawkes, C F C, and Hull, M R, 1947 *Camulodunum: First report on the excavations at Colchester, 1930-1939*, Society of Antiquities Research Report, **XIV**
- Hicks, M, and Hicks, A, 2001 *St Gregory's Priory, Northgate, Canterbury*, The Archaeology of Canterbury, New Series Volume, **II**, Canterbury Archaeological Trust
- Jarvis, M G, Allen, R H, Fordham, S J, Hazelden, J, Moffat A J, and Sturdy, R G, 1984 *Soils and their use in South-east England*, Soil Survey of England and Wales, Bulletin **15**, Harpenden, Hertfordshire
- Jones, C, and Yates, A, 2004 *Archaeological investigations on the SEEBOARD power line diversion at Shelford Farm Estate, Broad Oak, Canterbury, Kent*, Northamptonshire Archaeology report
- Jones, G P, 2009 Late Bronze Age pottery, in K Egging Dinwiddy and J Schuster, in P Andrews *et al*, 85-89
- Jones, M, and Walker, C, 2006 *Archaeological evaluation of the Canterbury to Kemsley 400Kv OHL diversion at Shelford Quarry, Canterbury, Kent, September 2005*, Northamptonshire Archaeology, report **06/98**
- JSAC 2000 *Archaeological field evaluation: Shelford Farm Estate, Area D, Interim report*, John Samuels Archaeological Consultants
- JSAC 2002a *Archaeological Mitigation Strategy: Shelford Farm Estate, Broad Oak, Canterbury: Alterations to 132kV Power Lines*, John Samuels Archaeological Consultants

- JSAC 2002b Archaeological mitigation strategy for landfill operations at Shelford Farm Estate, Broad Oak, Canterbury, Kent, December 2002, John Samuels Archaeological Consultants, **595/02/01b**
- JSAC 2002c *Shelford Farm Estate, Evaluation Area E*, John Samuels Archaeological Consultants
- LAT 1983 *Soils of South-east England*, **6**, Scale 1:250 000, Lawes Agricultural Trust
- Macpherson-Grant, N, 1994 The pottery, in D R J Perkins *et al*, 248-287
- Macpherson-Grant, N, 1995 Early to late Saxon Pottery, in K Blockley *et al*, 818-897
- MGC 1992 *Standards in the museum care of archaeological collections*, Museums and Galleries Commission
- Morris, E L, 2006 Later prehistoric pottery, in: Booth, P, (ed), 34-119
- MPRG 1998 *Guide to the classification of medieval ceramic forms*, Medieval Pottery Research Group, Occ Pap, **1**
- MPRG 2001 *Minimum standards for the processing, recording, analysis and publication of post-Roman ceramics*, Medieval Pottery Research Group, Occ Pap, **2**
- NA 2011 *Archaeological fieldwork manual*, Northamptonshire Archaeology
- Parfitt, K, Corke, B, and Cotter, J, 2006 *Townwall Street, Dover*, The Archaeology of Canterbury, New Series Volume, **III**, Canterbury Archaeological Trust
- PCRG 2010 *The study of later prehistoric pottery: general policies and guidelines for analysis and publication*, Prehistoric Ceramic Research Group, Occasional Papers, **1-2**
- Perkins, D R J, Macpherson-Grant, N, and Healey, E, 1994 Monkton Court Farm evaluation 1992, *Archaeologia Cantiana*, **114**, 248-287
- Pollard, R J, 1988 *The Roman pottery of Kent*, Kent Archaeological Society: Maidstone
- Price, J, and Cottam, S, 1998 *late Iron Age/early Roman Glass Vessels: A Handbook*, Council for British Archaeology, Practical Handbook in Archaeology, **14**
- Rackham, O, 1990 *Trees and Woodlands in the British Landscape*, Phoenix Press, London
- Rady, J, 2002 *Archaeological observations of geotechnical test pits at Shelford Farm Estate, Broad Oak Road, Canterbury, Kent*, Canterbury Archaeological Trust
- Rady, J, forthcoming *Excavations at Thanet Earth 2007-2008*, Canterbury Archaeological Trust Monograph
- Rahzt, P, and Meeson, R, 1992 *An Anglo-Saxon mill at Tamworth, Excavations in the Bolebridge Street area of Tamworth, Staffordshire, in 1971 and 1978*, CBA Research Report, **83**
- Schweingruber, F H, 1990 *Mikroskopische Holzanatomie. Anatomie microscopique du bois. Microscopic wood anatomy*, Swiss Federal Institute of Forestry Research
- Scott, B, Allen, P, and Bridgland, D R, 2003 *Evaluation of quaternary deposits on the site of Extraction Area 13*, Canterbury Archaeological Trust, report **2003/7**
- Spillet, P, Stebbing, W, and Dunning, G, 1942 A pottery kiln site at Tyler Hill, near Canterbury, *Archaeologia Cantiana*, **55**, 57-64
- Stace, C, 1997 *New flora of the British Isles*, 2nd edition, Cambridge University Press
- Stevens, S, in prep *Archaeological Excavations at New Dover Road, Canterbury*, Archaeology South-East report
- Symonds, R P, and Wade, S, 1999 *Roman Pottery from Excavations in Colchester, 1971-86*, Colchester Archaeological Trust, Colchester Archaeological Report, **10**
- Thompson, I, 1982 *Grog-tempered 'Belgic' pottery of south-eastern England*, British Archaeological Report, British Series, **108**
- Walker, K, 1990 *Guidelines for the preparation of excavation archives for long-term storage*, United Kingdom Institute for Conservation
- Watkinson, D, and Neal, V, 1998 *First Aid for Finds*, United Kingdom Institute of Conservation
- Wenban-Smith, F, 2003 *Shelford Farm Estate, Canterbury (Landfill Phase 1): Paolithic/Pleistocene field evaluation report*, University of Southampton

Wright, S M, 1992 Millstones, in Rahzt and Meeson 1992, 70-79

Yates, A, 2003a *Shelford Farm Estate, Broad Oak, Canterbury: Alterations to 132KV Power Lines: Project design for archaeological mitigation works*, Northamptonshire Archaeology

Yates, A, 2003b *Archaeological excavations at Shelford Farm Estate landfill, Broad Oak, Canterbury, Kent: Interim Statement, March-October 2003*, Northamptonshire Archaeology

Websites

ADS 2011 www.ads.ahds.ac.uk Archaeological Data Service (ADS) website

BGS 2009 www.bgs.ac.uk/geoindex/home.html British Geological Survey website

KCC 2008

www.kent.gov.uk/leisure_and_culture/heritage/south_east_research_framework
Kent County Council website

MOLA

09 January 2018



MOLA
Bolton House
Wootton Hall Park
Northampton
NN4 8BN
01604 809800
www.mola.org.uk
sparry@mola.org.uk