Living on the Edge

Archaeological investigations at Steart Point, Somerset

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Area 502 cobbled surface 20543

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The latrine pit (21165), a view across the site, the three Venetian glass beads (ONs 208, 228 and 234)

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Contents

List of Figures

List of Plates

List of Tables

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The project archive is currently held at the offices of Wessex Archaeology in Salisbury, under the project codes 77220–1; it will be deposited in the archive store at the Somerset Heritage Centre in Taunton, under the accession code TTNCM 105/2011.

Abstract

Archaeological works at Steart Point Peninsula, near Bridgwater, Somerset (centred on National Grid Reference 327000 145000) have recovered evidence for the exploitation and settlement of the peninsula from the prehistoric period onwards. The results overall fit broad regional patterns of wetland environments in Southern Britain, where phases of land reclamation and climatic amelioration have been key factors in the successful exploitation, occupation and development of these landscapes. These phases of reclamation are strongly linked to the prevailing patterns of associated sea level increases (marine transgressions) which periodically made coastal wetland landscapes less favourable habitats, the most recent examples occurring in the late Romano-British to early medieval (4th–10th centuries AD) and late medieval to early post-medieval periods (14th–16th centuries).

A number of significant sites and areas of past human activity and inhabitation from the Middle/Late Iron Age (400 BC–AD 43), the Romano-British period (1st–4th centuries AD), the medieval (11th–15th centuries) and early post-medieval periods (16th–17th centuries) have been recorded during the current fieldwork. The results follow broad regional patterns seen in the Severn Estuary Levels, with the more regularly planned farming landscapes and permanent settlement evidence from the Romano-British period onwards, developing from seasonal, episodic exploitation of this resource-rich salt-marsh landscape. It has also highlighted extensive continuities within the Steart Point landscape of land divisions and drainage patterns which have their inception at least as far back as the early medieval period (11th–13th centuries) and possibly the Romano-British period.

Chapter 1
Introduction

Project Background

Between 2012 and 2013 Wessex Archaeology carried out an extended programme of archaeological evaluation, excavation and watching brief across a large area of the Central Somerset Levels, at Steart Point peninsula, approximately 14 km north of Bridgwater. The archaeological works were carried out as part of a package of measures designed to alleviate the anticipated off-site impacts associated with construction work at Bristol Port, in particular the loss of floodplain and wildlife habitat along the Seven Estuary. The mitigation measures on the peninsula comprised the construction of an extensive artificial floodplain creek system extending over a footprint of approximately 26 ha centred on National Grid Reference (NGR) 327000 145000 (Fig. 1.1).

The work was commissioned by Team van Oord for the Environment Agency (EA), and monitored by English Heritage (EH) and Somerset County Council (SCC). The archaeological fieldwork benefited from the information provided by an early desk-based assessment of the site (Wessex Archaeology 2008) and extended heritage assessment of the wider area (Wessex Archaeology 2009).

Initial investigation on or in the vicinity of the site (Figs 1.1 and 1.2) included the following:

- evaluation of Ponds 1 and 2 (Wessex Archaeology 2010a), which produced a small number of unstratified modern finds but no archaeological features of significance;
- geoarchaeological borehole survey and palaeo-environmental assessment (Wessex Archaeology 2012a), which confirmed the presence of well-preserved Pleistocene and Holocene deposits in the area. Radiocarbon dates obtained from a peat layer identified in two of the boreholes returned calibrated dates of 3100–2910 BC (4020±35 BP, SUERC-38608), and 2630–2460 BC (4390±30 BP, SUERC-38610), indicating peat formation during the Neolithic period;
- fieldwalking survey (Wessex Archaeology 2011a), the results of which were used to target areas of high archaeological potential using geophysical survey;
- targeted geophysical survey (Wessex Archaeology 2012b) along the creek system and its associated ponds based on the results of the field-walking survey;
- evaluation of the proposed creek system (Area D) and associated impact zones (Wessex Archaeology 2012c and d) included an area to the south-west of Ponds 1 and 2 (Area E), the Old Flood Defences and several 'moated' sites within Area D. The evaluation in Area E was undertaken to investigate the likely impact of four ponds (nos 5–8), and a *c.* 2 km long new South Drain.

Based on the evaluation results, four areas (Areas 500–503) were selected for full excavation within Area D (Fig. 1.1). Area 500 lay within the south-eastern extent of Pond 3, and was located to investigate a possible Middle–Late Iron Age occupation spread and associated features. Area 501, to the north-west of Pond 4, was located to investigate a rectilinear field-system of Romano-British date, and Areas 502 and 503 were targeted to investigate two 'moated' sites at the east end of the creek system.

A watching brief (Wessex Archaeology 2012e) was maintained during the construction of the western half of the creek system and during ancillary works associated with the scheme. These included geotechnical pits, cable and flood barrier trenches, and ground-works related to the site compound. The watching brief provided little additional archaeological information.

In addition to the investigations listed above, fieldwork also took place in an area to the west of the site:

- evaluation on a deserted farm 1 km to the west of the site (Somerset Historic Environment Record (SHER) No. 34653; centred on NGR 324539 144852), which targeted earthworks and geophysical anomalies (Wessex Archaeology 2011b). Two phases of building remains were identified within a *c.* 55 m square ditched enclosure;
- geoarchaeological borehole survey (Wessex Archaeology 2011c), which confirmed the presence of well-preserved Pleistocene and Holocene deposits in the area.

Figure 1.1 Location of site, evaluation trenches and excavation areas

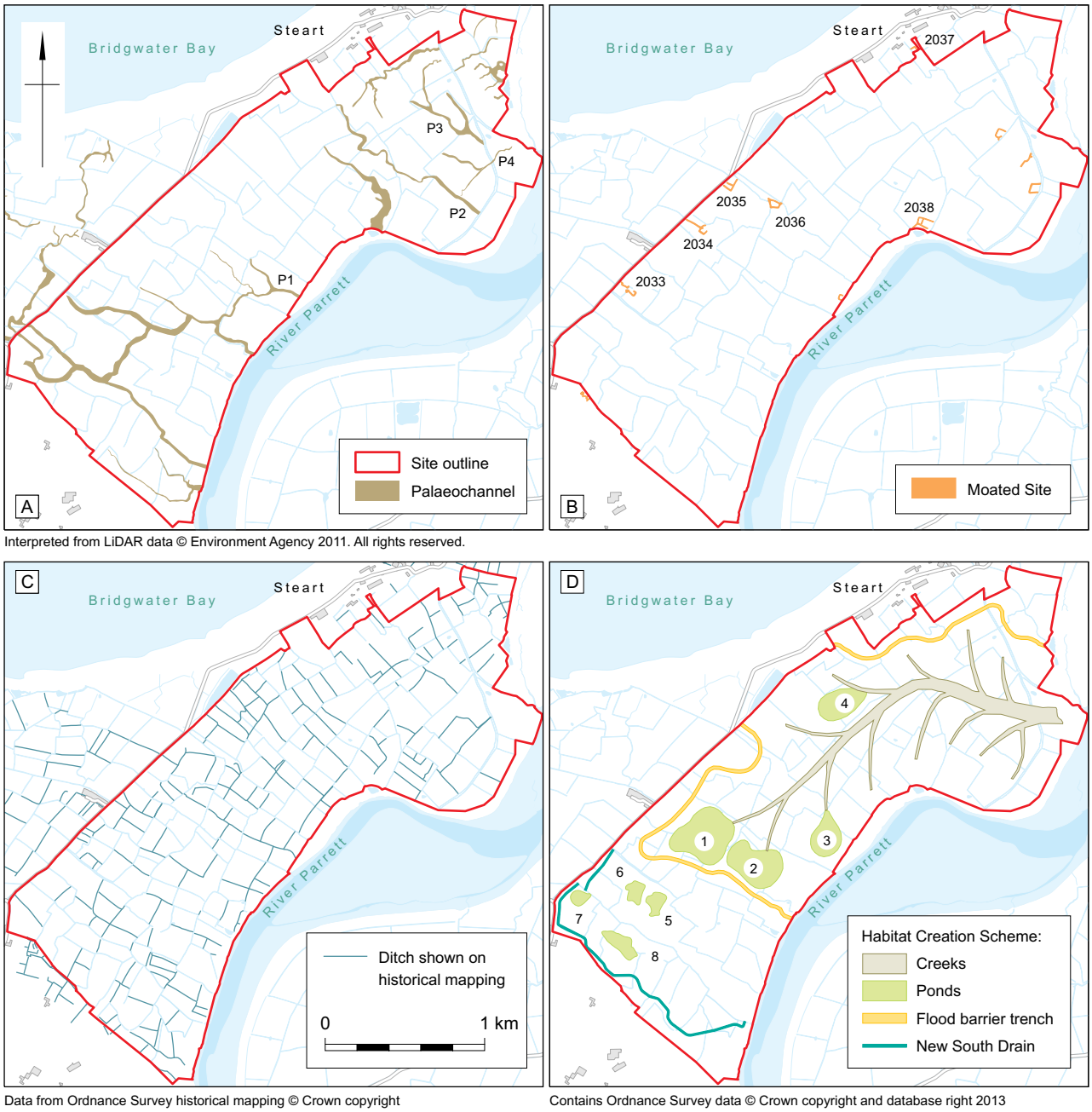

Figure 1.2 Location of palaeochannels, moated sites, field systems, and the habitat creation scheme

Further mitigation measures are planned for this western area, and full reporting on this work, which was commissioned by The Bristol Port Company, is beyond the remit of the current project, but pertinent details have been incorporated in this report.

Geology, Topography and Land-use

The site is only *c.* 5–6 metres above Ordnance Datum and comprised an area of flat pasture fields. It lies on the north-western edge of the valley of the River Parrett, which flows *c.* 1 km south-west of the site in a south-west to north-east direction towards Burnham-on-Sea, where it converges with the Bristol Channel and the River Brue between Steart and Berrow Flats (Fig. 1.1).

The solid geology within the site consists of Mercia Mudstone Group and the Lower Lias (Brown 1980). In places the solid geology is overlain by Pleistocene sediments, which comprise sands and gravels, undifferentiated Head deposits, and alluvium interspersed with peat layers. The upper alluvium is equivalent to the Wentlooge palaeosol, which is thought to have formed as a result of land drainage during the Romano-British period (Allen and Rae 1987). The lower peat layer associated with the alluvial sequence is exposed from time to time on the

foreshore near Hinkley Point and has been dated to 8365±100 BP. A more extensive peat lies at around the level of Ordnance Datum and has yielded a date of 4200±100 BP (Brown 1980).

Bridgwater Bay has a complex history of erosion and accretion, illustrated by the constant mobility and evolution of its islands (Steart, Dunball, Slab and Fenning Islands). Cartographic, hydrographic and documentary research by McDonnell (1994; 1995) has illustrated just how unstable these islands can be, and how rapidly they can change in both size and location in response to tidal influences; for example, Slab Island appeared and disappeared from maps of the 18th century within about 70 years (McDonnell 1995, 74). Evidence for the landscape development of Steart Point (Wessex Archaeology 2009) indicates that the River Parrett has altered course several times in the past, leaving behind remnant field systems that relate to its previous positions (McDonnell 1994, fig. 38; 1995, fig. 32).

An extensive system of flood defences or sea walls has been recorded along both banks of the Parrett on Pawlett Hams; the main sea wall lies on the river banks, but there are successive sea and flood banks further inland (Crowther and Dickson 2008, 211–12, fig. 9.40).

The causeway between Steart Island and the mainland appears to have been breached over some five or six years in the late 18th century. Initially the breach seems to have been made by a high Spring tide in *c.* 1792, and worsened year on year. By *c.* 1796 Steart Warren had definitely become an island, and a year later an outward-bound vessel was able to sail through the gap (SomHC DD\SAS/C795/SE/113/2 pp9–10). By 1809 Steart Island with its Warren House and two enclosed fields was isolated by almost a mile of mudflats from the mainland. Dynamic coastline changes continued into the 20th century. In 1922 there was an episode of erosion at Ackerman Point on the east side of the peninsula; a slip in the river embankment here was repaired by piling, filling and faggotting, but there was another slip in November 1923 (SomHC D\RA2/9/20). Erosion was continuing at Steart Point in 1937, when seven shingle ridges were found to have been deposited by lateral movement, despite the construction of a groyne (SomHC DD\X\WBB/27 pp4, 17–18). Continued erosion has resulted in the destruction of the RAF gunnery and bombing site formerly situated on the coastal edge.

Historical and Archaeological Background

The Steart Point peninsula is located near the mouth of the Severn Estuary, in the central part of the Somerset Levels. The Levels are a man-made landscape and the result of sustained drainage and sea defence since the Romano-British period. Evidence from hydrographic, geophysical and borehole surveys indicates that the Somerset Levels occupy a broad sediment-filled valley or inlet which is up to 30 m deep in places (Hosfield *et al.* 2008, 43). The land drains north-westwards into the main valley of the Severn Estuary via a network of subsidiary valleys, including the Parrett and its tributary the Cary. As a result, the early landscape is now buried beneath deep Holocene marine sediments. The sedimentary sequence in the coastal area of the Somerset Levels is similar to the general sequence for the Severn Estuary as described by Allen and Rae (1987).

Elements of the buried Holocene landscape, including forest beds, and peat or organic saltmarsh deposits, have been recorded around the coast of south-west England. Sea level rise *c.* 7000 BC, which peaked *c.* 5000 BC, affected the Lower Severn Estuary (Norman 1982, 15–16) and drowned coastal woodland, low-lying areas and early prehistoric coastal sites, leaving a deposit of clays, sands and occasional accumulations of peat (Norman 1982, 15; Straker 2000, 64; see also Russell, Chapter 4). Locally, the remains of a submerged Mesolithic forest (HER 34078; NMR 975506: Wessex Archaeology 2008) have been revealed at low tide just off the coast at Stolford, 10 km to the west of the peninsula. By the Early Neolithic, the rate of sea-level rise had slowed dramatically, allowing the establishment of extensive organic peat deposits (Haslett *et al.* 2000, 49), preserved by marine sediments deposited after transgressions. A sequence of up to six episodes of peat formation and alternating mineral sediments of silts and clays has been identified at Porlock to the west of the peninsula. Further peat deposits have been identified at Stolford and Wick Rocks (McDonnell 1994, 108). On the other side of the Severn, at the coastal site of Goldcliff, the intertidal erosion of peat deposits has exposed a Mesolithic site, including a series of human footprints stratified within estuarine silts (Bell 1994).

There is limited evidence for prehistoric or Romano-British activity in the intertidal zone of the Severn Estuary (Crowther and Dickson 2008, 114–5). Excavations at Brean Down, to the north of the peninsula, have revealed a well preserved Bronze Age settlement sealed beneath windblown sand (Bell 1990; 2000). The settlement was permanently occupied, as indicated by stone and wooden structures, and a large and diverse artefact assemblage, while at Goldcliff in Gwent there is evidence for seasonal occupation during this period (Bell 2000).

Evidence for Iron Age settlement in the Somerset Levels has been provided by excavations at the lake

villages of Glastonbury and Mere to the east of the peninsula, and from a small number of other sites located on 'islands' in the Brue Valley. These include the Middle Iron Age sites at Alstone and Lympsham (Minnitt 2000, 73), and the Middle–Late Iron Age site at Huntworth on the floodplain of the River Parrett to the south of Bridgwater (Powell *et al.* 2008). A number of hillforts and other settlement sites occupy the higher ground around the Severn Estuary; the closest to the peninsula are Cannington, Brent Knoll and Brean Down, and the settlement evidence recently discovered at Hinkley Point (S. Membery pers. comm.). Further afield, a seasonally occupied Middle–Late Iron Age settlement has been identified at Hallen in the Avon Levels (Gardiner *et al.* 2002). It is also worth noting that Alstone, Lympsham, Brent Knoll and Brean Down were all 'offshore islands' during the Iron Age and were surrounded by salt marsh and mudflats (Brunning 2013a).

Iron Age salt extraction sites have been identified at Banwell Moor in north Somerset and Badgeworth in the Brue Valley, indicating exploitation of the coast environment (Minnitt 2000, 74). Iron Age logboats have been recovered from a number of sites in the Levels (*ibid.*, 73–4) indicating that water transport was important, and on the other side of the Estuary, at Barland Farm in Gwent, a 'Romano-Celtic' boat was found associated with a jetty/landing stage or bridge feature. Boats of this type exhibit estuary and sea-going characteristics (Bell and Neumann 1997; Nayling and McGrail 1995) indicating that goods were traded up and down the Estuary.

Parts of the Somerset Levels were reclaimed during the Romano-British period, probably by wealthy villa-estates during a period of prosperity and innovation (Rippon 2000a, 91). The process began in the late 1st century AD, and at least three areas are known to have been protected from sea flooding and/or drained (Leech and Leach 1982, 69). These areas are located to the north and south of Brent Knoll, the North Somerset Levels and the upper Axe Valley, south of Cheddar. There seems to have been a conscious decision about landscape divisions, with places such as the Brue Valley left as tidal marsh and exploited for its natural resources (Rippon 2000a, 86–9). There is, however, evidence from Bleak Bridge that part of the coastal marshes within the Brue Valley had been reclaimed for agriculture (Brunning 2013b). LiDAR data indicates the presence of a large, buried tidal channel to the north of Burnham-on-Sea in the Romano-British period (Brunning and Farr-Cox 2005).

There are few Romano-British settlements on the west side of the River Parrett and none previously recorded on the peninsula. Settlement activity has been recorded near Stolford, and at Combwich, which also has a natural harbour at Combwich Pill giving easy access to the River Parrett and the Severn Estuary beyond. Goods could therefore have been traded widely by river and sea, and even inland via the network of local roads. Two further ports lay upstream of Combwich, at Crandon Bridge and Ilchester. There is also extensive evidence for salt production in the Brue Valley at this time, including around Highbridge, Huntspill and along the fen-edge around Burtle (Rippon 1997, fig. 16; Grove and Brunning 1998).

The coastal wetlands of the Severn Estuary were affected by a period of post-Roman inundation and the Romano-British landscape south of Mendip was buried beneath *c.* 0.7 m of alluvium due to subsequent tidal flooding (Rippon 2000a, 88–9). The Steart peninsula would have been particularly vulnerable at this time, but the settlement at Combwich continued to be occupied, indicating perhaps that only the very low-lying areas were affected. The coastal marshes and other affected areas were re-settled by the 11th century, and many places were protected from tidal inundations by one or more sea walls. By the 13th century the higher coastal clay-lands were embanked, drained and settled (*ibid.*, 89–90).

Historic mapping (Figs 1.3–6) indicates that much of the farmland on the peninsula was more subdivided than is the case today. To the east of Stert Drove, there are occasional parcels of smaller fields, but for the most part the fields appear to comprise fairly regular, rectangular co-axial fields, aligned roughly north-west to south-east, perpendicular to the road. This pattern only changes near the point itself, where a number of the fields take their alignment off a second road. Landscape divisions of this type are generally quite late in the evolution of a landscape (Rippon 1996, 50–2).

There is evidence for extensive farming across the peninsula using the 'ridge and vurrow' technique, much of which is visible on aerial photographs and in the LiDAR data (Wessex Archaeology 2009, figs 7–9). This technique, employing plough-formed, linear, flat-topped ridging, was used to improve pasture and meadowland drainage; large areas of ridge and vurrow were usually overlaid with a lattice system of narrow, linear drainage trenches ('gripes'), as seen on the banks of the Parrett (Rippon 1997, 224). The ridge and vurrow seen across the Steart peninsula is undated, and could be post-medieval, but similar methods of surface drainage may have been used since the medieval period and possibly earlier.

LiDAR images show 14 'moated' sites on the peninsula, six of which lie within mitigation Area D, and to which can be added the sites investigated in

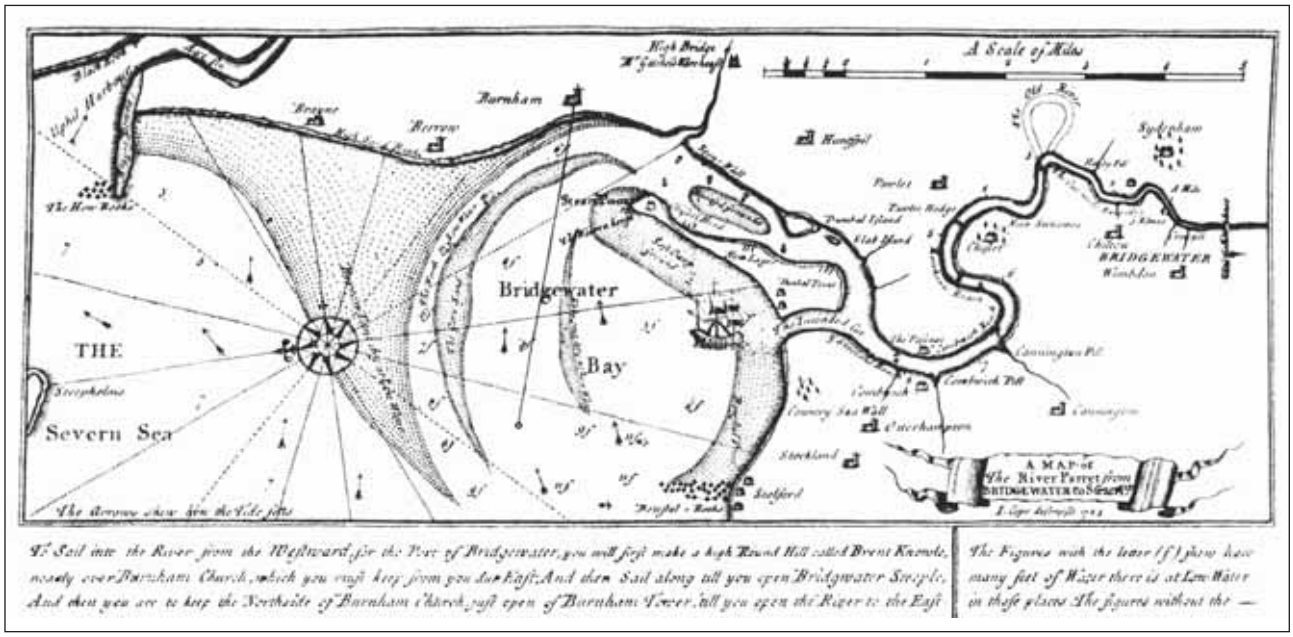

Figure 1.3 Map dating from 1723, showing the River Parrett from Bridgwater to Steart Point (Ref: SHC D\RA/9/9)

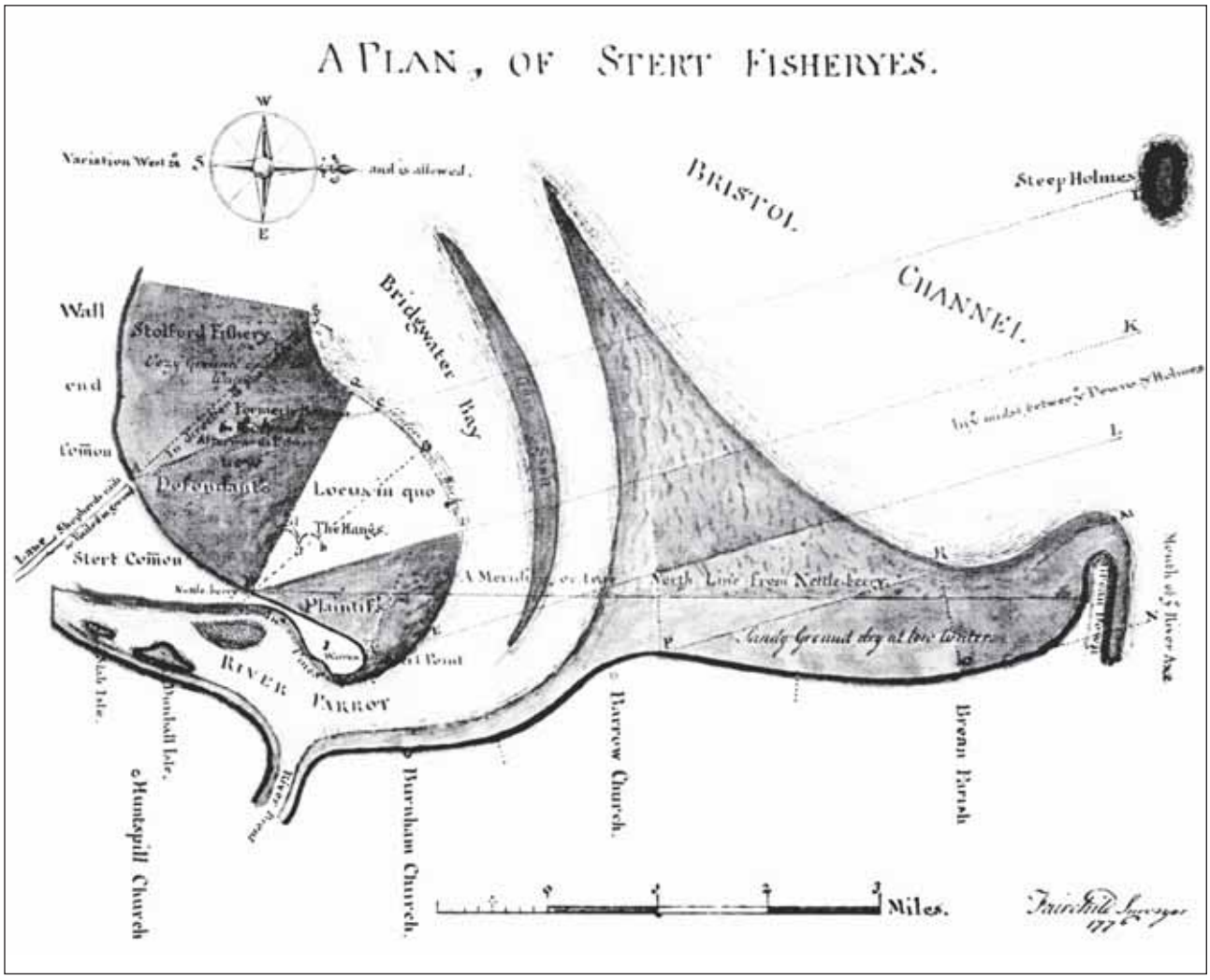

Figure 1.4 Fairchild's 'A Plan of Stert Fisheryes', 1776 (Ref: SHC D\RA/9/24)

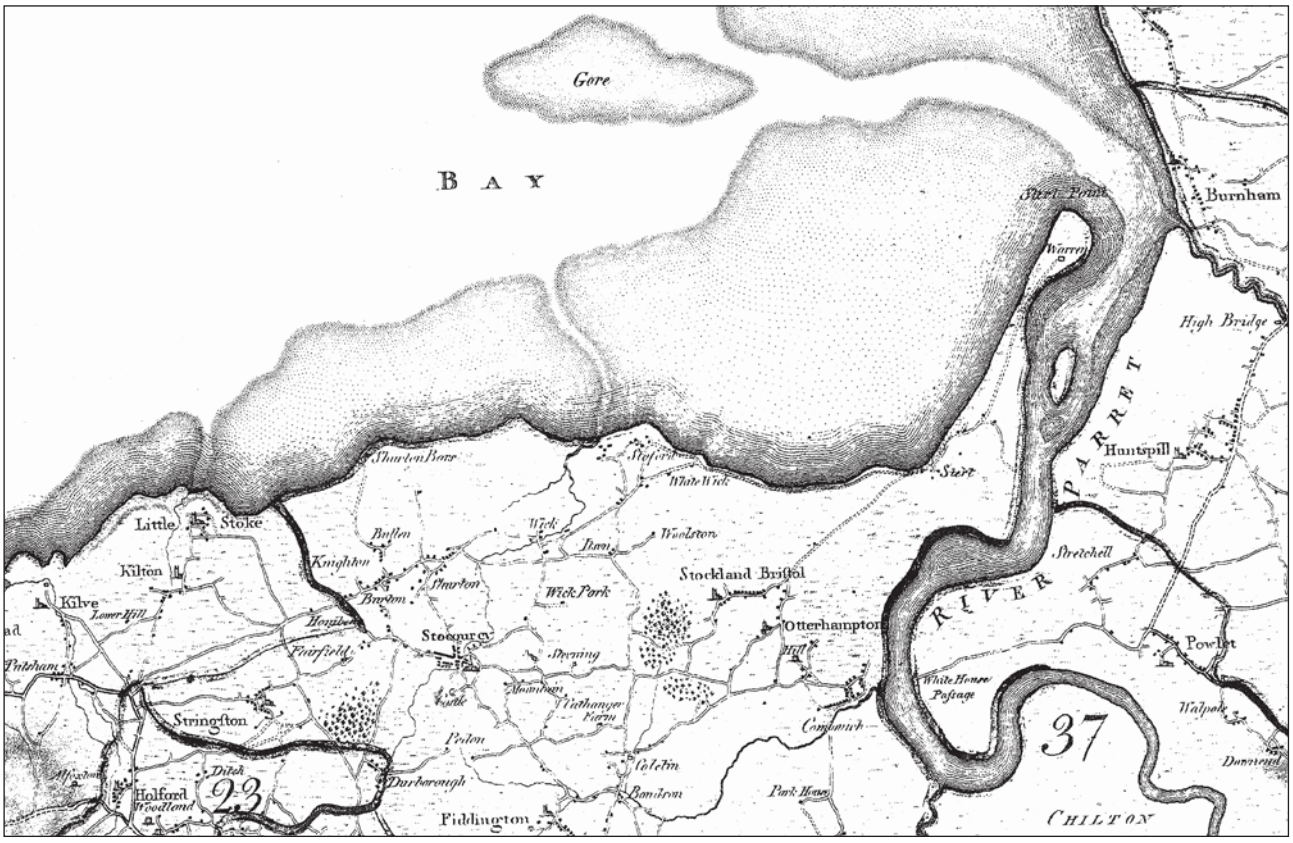

Figure 1.5 Day and Masters map of Somerset 1782 (Ref: SHC DD\WG/MAP/29)

Areas 502 and 503, visible on aerial photographs (Wessex Archaeology 2009, fig. 7, appendix 1; Fig. 1.2, B). Most of these sites comprise roughly rectangular platforms either wholly or partially surrounded by ditches or 'moats'. Most are situated on low-lying ground within the Levels, but two were noted on the higher ground to the east of Chalcott Farm, Stogursey. Others appear to be closely linked to areas of existing settlement, whilst the remainder are more likely to represent abandoned cottages, houses or farms. Their distribution suggests that the medieval landscape was once divided into a network of smaller farms linked by tracks and droveways, and that many of these later became incorporated into the current farm-holdings.

A deserted medieval village is recorded at Steart (NMR 617146), but the site was not located by the Severn Estuary Rapid Coastal Zone Assessment Survey (Crowther and Dickson 2008, 180). Windmill mounds have been identified at Stockland Bristol, at Otterhampton and to the south of the western edge of Wall Common (SHER 10657). Earlier excavations on this site produced medieval pottery, and a windmill is recorded on the site as late as 1614; it was flooded by the sea in 1655. As well as the two *Domesday* mills in Stogursey, a number of other mills are known in the area between the 12th and 15th centuries.

The fact that the form of the Steart peninsula has changed significantly is evident from the earliest detailed maps of the peninsula. Various 18th- and 19th-century maps illustrate this (Figs 1.3–6). The earliest, drawn up in 1723, comprises an accurate survey of the River Parrett from Bridgwater to Steart Point (Fig. 1.3), and was produced as part of an unsuccessful scheme to cut a deep channel across Steart Point in order to improve access to the river for shipping. As such, its primary concern is the mapping of the channels and depths rather than the landscape, but it does show that Steart Island was originally joined to the mainland by a narrow causeway or neck of land. Some settlements are shown, but only in a highly stylised fashion. It also shows a number of channels within the channel of the River Parrett, the evolution of which has been studied in some detail by McDonnell (1995). Fairchild's 'A Plan of Stert Fisheryes', drawn up in 1776, shows a similar coastline, again with a thin neck of land linking Steart Island to the mainland (Fig. 1.4). As with the earlier map, the main focus was to record nautical features – specifically the extents of some of the sea fisheries which were under dispute at the time. In 1782 the island is still joined to the mainland by a narrow causeway, but by the time of Greenwood's map of 1822 it is separate (Figs 1.5–1.6).

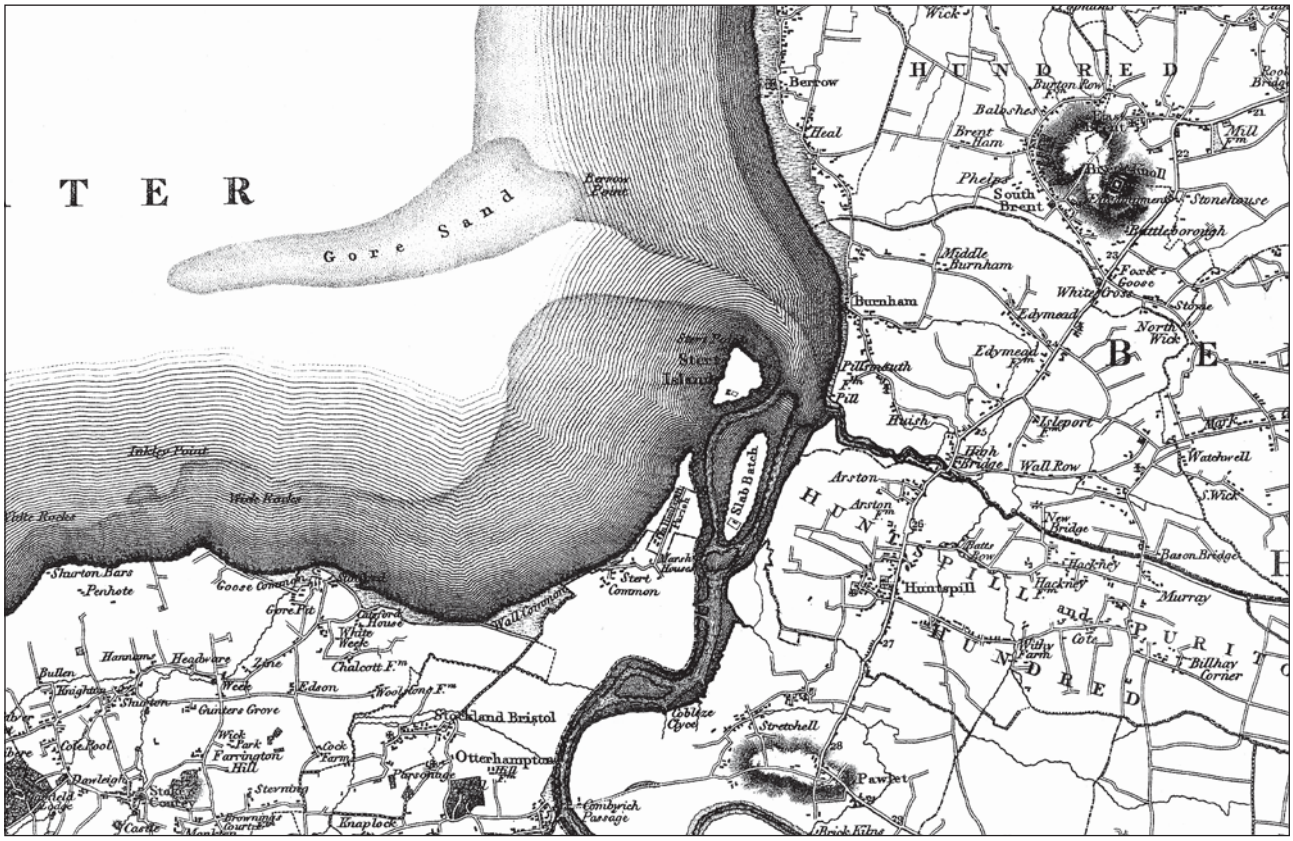

Figure 1.6 Greenwood map of Somerset 1822 (Ref: SHC DD/X/MTN)

The first accurate maps of the peninsula itself date to the early 19th century – the Ordnance Survey surveyed the area in 1803, and subsequent maps derive much of their information from their work. The 1853 nautical survey drawn up by Alldridge was primarily intended as a navigational aid, but it does show the landscape in great detail, and it is possible to identify historic elements of the landscape which no longer survive. Amongst these is a structure close to the tip of Steart Point recorded on the map as 'Cox's Folly', and which now lies within the intertidal zone. Elsewhere, it reveals a very similar pattern of enclosure and settlement to that surviving today.

In the recent past, the peninsula has been used primarily to graze livestock, while arable farming has proved largely unproductive, due in part to the heavy clay soils, and as a result the number of small farms has diminished. Other farms have been abandoned due to changes in the course of the River Parrett, while some buildings adjacent to Stert Flats have disappeared underneath shifting sand dunes.

During the Second World War the British military sited several gunnery ranges, telecommunications buildings and a bombing range observation post quadrant tower on the peninsula. The remains of a number of target vessels or rafts are linked to this activity, and other wrecks have also been recorded around the peninsula.

Methodology

The methods used during the evaluation, excavation and watching brief are detailed in the written schemes of investigation (Wessex Archaeology 2012c and e) and are not reiterated here, except to detail the main points and highlight variations made in the field, which were agreed between EA, EH and SCC.

The main areas of investigation were identified and located through a combination of techniques including fieldwalking, geophysical survey and trial trench evaluation. The moated sites at the northern end of the peninsula (Areas 502 and 503) were clearly visible on a World War II aerial photograph and LiDAR, while the other moated sites investigated were visible as earthwork features.

Evaluation

Topsoil and overburden were removed using a mechanical excavator. Where practicable, spoil was scanned for artefacts visually, as well as with a metal detector. Archaeological investigations generally did not need to exceed a maximum depth of 1 m.

However, machine-excavated test pits were excavated at either or both ends of some trenches to further understand the alluvial sequence and

investigate the possibility of archaeological features/deposits being sealed by a significant thickness of alluvial deposits.

Watching Brief

The archaeological watching brief monitored the investigative BACTEC Unexploded Ordnance (UXO) works as well as other ancillary groundworks associated with the proposed development. The UXO watching brief focused on:

- Identification, recording, and if feasible, rapid excavation of archaeological remains exposed;
- Recording a summary of the stratigraphic sequence encountered.

The ancillary groundworks watching brief focused on exposed archaeological horizons which were cleaned by hand where required, investigated as necessary and recorded. In accordance with a sampling strategy developed on site in consultation with the Curator (SCC), care was taken not to compromise the integrity of complex archaeological features or deposits that might be better excavated under more extensive/detailed mitigation.

Excavation

All archaeological remains discovered were hand-cleaned where necessary, and then photographed and recorded using both Leica Viva GPS survey equipment and hand-drawn plans. Representative sections of the excavation areas were also photographed and drawn, demonstrating the typical stratigraphic sequence and depth, and highlighting significant variations to this sequence.

A sufficient sample was excavated from archaeological features to achieve a minimum 10% by length excavation of 'linear' features (ie, ditches, gullies, beam slots etc), whilst discrete features (pits, postholes etc) were in general 50% excavated.

Chapter 2
Settlement Sequence

Middle–Late Iron Age

With the exception of a few flint flakes and cores recovered during fieldwalking and as residual finds in later features, the most extensive evidence for prehistoric activity on the peninsula came from the Area 500 excavations (Fig. 2.1). The archaeological remains in this area of the site include a number of Middle–Late Iron Age spreads and other features. Additional evidence was recorded in evaluation Trench 168, 55 m to the east of Area 500 (Fig. 2.2), and Trenches 324 and 327 in Area E (Fig. 2.3).

The evidence described below indicates that during the Middle–Late Iron Age the tidal creeks through the coastal salt marshes of the peninsula were exploited on a seasonal basis while more formal cultivation and enclosure took place on the upper marshes where the land was drier and less susceptible to seasonal flooding.

Area 500

Middle–Late Iron Age spreads and other features
Five discrete spreads (10303/20013, 20003, 20017/20031, 20152, 20060) were recorded in the eastern part of the of the excavation area, located to the immediate west and south of a bend in

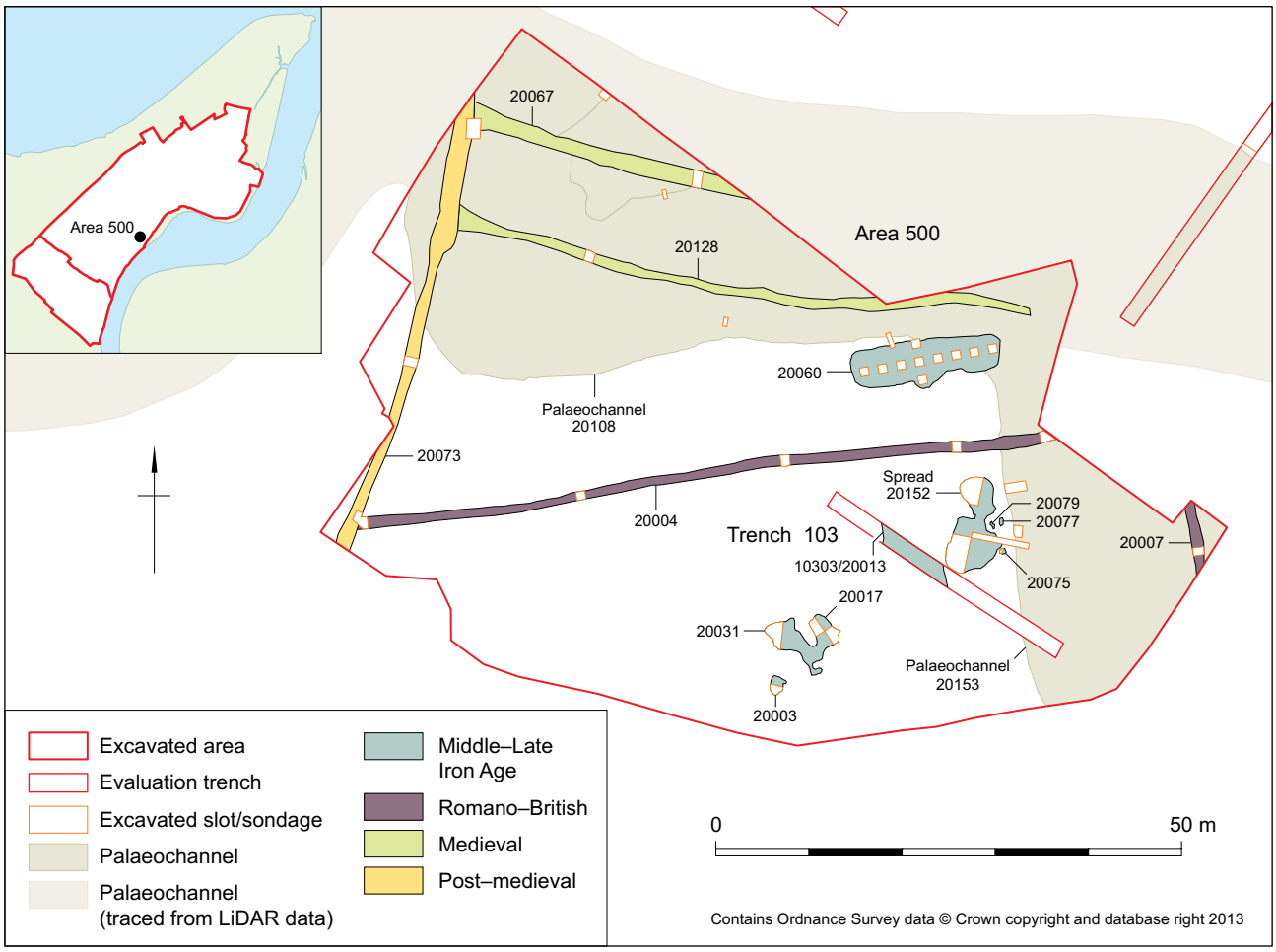

Figure 2.1 Area 500

palaeochannel 20108/20153 (P1 in Fig. 1.2, A). The spreads were irregular in plan, mostly 4–5 m in extent, though in places (eg, 20060) extending up to 16 m along the edge of palaeochannel (Fig. 2.1). The dark brown, charcoal-rich deposits varied in thickness from less than 0.02 m on the south side of the palaeochannel to 0.21 m on the west side, and contained patches of *in situ* burnt clay (Pl. 2.1).

A relatively large amount (1.664 kg) of Middle–Late Iron Age pottery was recovered from the various spreads, almost 58% coming from spread 20060 to the south of palaeochannel 20108. Two broken pottery vessels were recorded *in situ*, one from spread 20152 (Object Number (ON) 3; Fig. 3.1, 9) and the other from 20060 (ON 5), together with other vessels (Fig. 3.1, 2–4, 8). Other finds include animal bone, fired clay, burnt flint and marine shell. A small fragment of sheet iron, of unknown function, was recovered from 20060 (ON 7), possibly intrusive in this context.

The charcoal from the spreads includes oak, alder and blackthorn, and hulled wheat, in particular emmer, but also barley, as well as arable weed seeds and hazelnut shell fragments were recovered. The assemblage, which is largely composed of glume base fragments, is characteristic of waste from the dehusking of hulled wheat and indicates crop processing in the vicinity (see Wyles, Chapter 4).

Overall, the artefactual and palaeoenvironmental evidence recovered from the spreads is consistent with domestic, rather than industrial activity. However, if the area was settled during this period then it must have been relatively short-lived, possibly even seasonal, since with the exception of three undated postholes (20075, 20077, and 20079) to the immediate east of spread 21052, there is little or no evidence of any structures on the site.

Slots excavated across the interface between the spreads and palaochannels clearly showed that these deposits had eroded into the adjacent palaeochannels, probably as a result of overbank flooding, perhaps due to seasonal marine inundations given the presence of brackish water species in the mollusc assemblage (see Wyles, Chapter 4). The flood events were visible as thin layers of sterile, light greyish-brown alluvium sandwiched between the dark, charcoal-rich, occupation-related deposits.

A similar charcoal-rich spread, 16816, was identified in Trench 168, which was targeted on one of the known 'moated' sites (Fig. 2.2). The deposit contained Middle–Late Iron Age pottery, animal bone, fired clay, charred cereal grains and hazelnut shells. A single sherd of Middle–Late Iron Age pottery was recovered from the lower fill of north-west to south-east aligned ditch 16807 at the south-east end of the trench. The ditch was on a different alignment to the moat ditch and is assumed to be contemporary with the deposit. LiDAR data indicates that spread 16816 is located further along the same palaeochannel identified in Area 500, a short distance to the west, indicating a zone of activity along the edge of the channel.

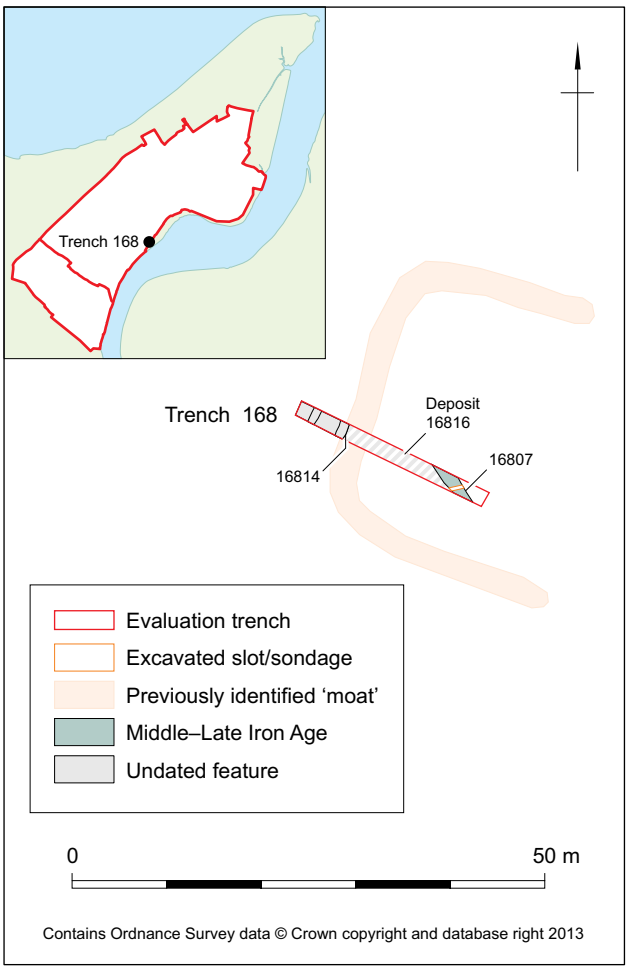

Figure 2.2 Trench 168

Plate 2.1 Spread 20152

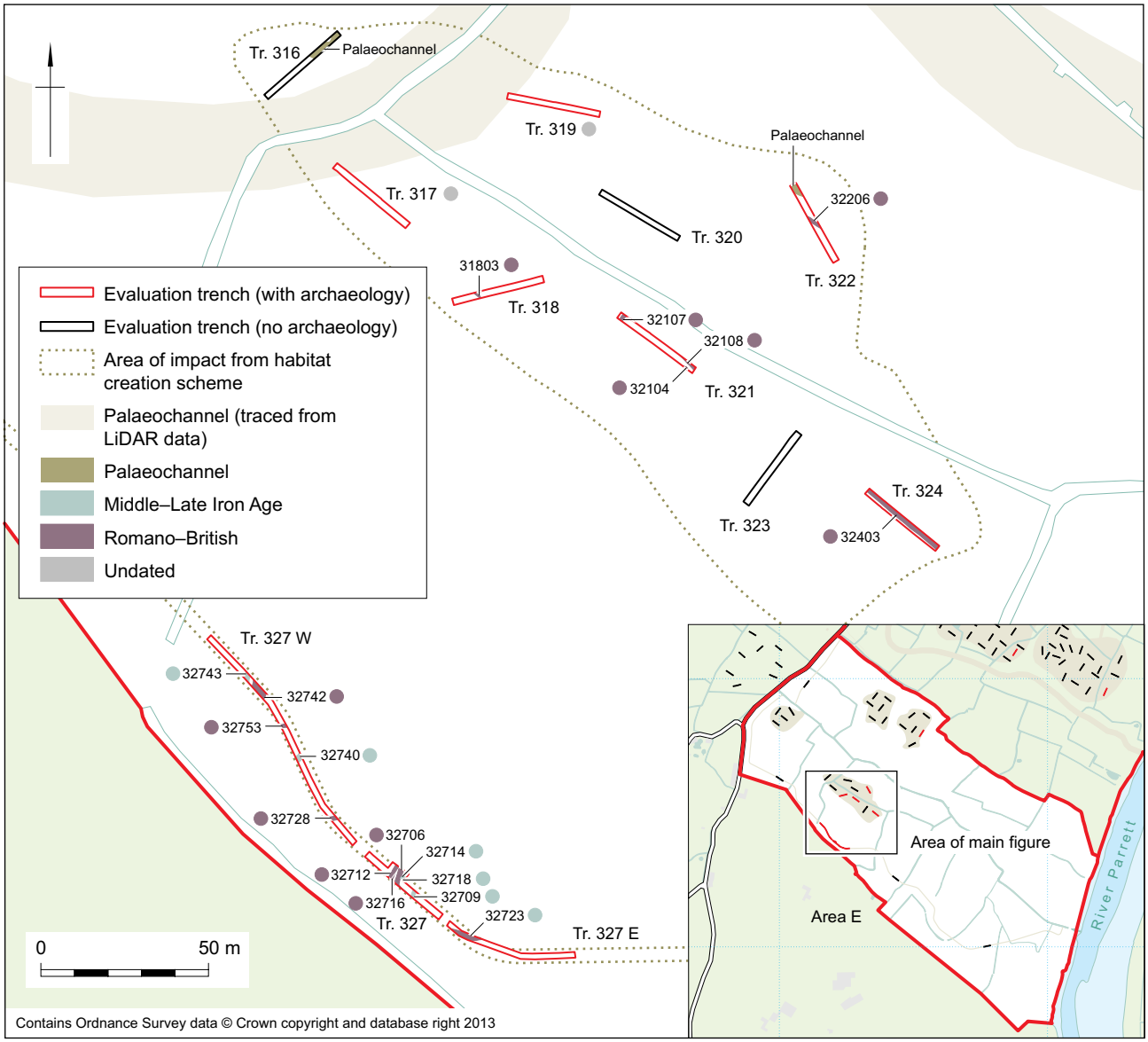

Figure 2.3 Area E

Area E

Middle–Late Iron Age pottery was recovered from several ditches and gullies in Area E (Fig. 2.3). A single sherd, from a bead rim jar (Fig. 3.1, 10), was recovered from the primary fill of ditch 32403, a large (1.8 m wide and 0.8 m deep) feature with steeply sloping straight sides and a flat base. The other features were all located in Trench 327; they include ditches 32723 and 32740, and gullies 32709, 32714 and 32718. The ditches were between 1.8–4 m wide and 0.25–0.9 m deep, while the gullies were between 0.3–0.6 m wide and 0.1–0.3 m deep. A few sherds of Middle–Late Iron Age pottery were recovered from each of these features (Fig. 3.1, 6, 7), together with a small amount of animal bone and fired clay.

Romano-British

The most significant evidence of Romano-British exploitation and habitation on the peninsula came from excavation Area 501, with limited further evidence from Areas 500 and the evaluation in Area E.

Area 500

A rectilinear pattern of ditches (20004, 20007) was recorded (Fig. 2.1), the ditches appearing to form part of a field system of possible Romano-British date. The ditches were between 1.10–1.40 m wide and 0.60–0.90 m deep, with U-shaped profiles. Both ditches cut palaeochannel 20153, and ditch 20004

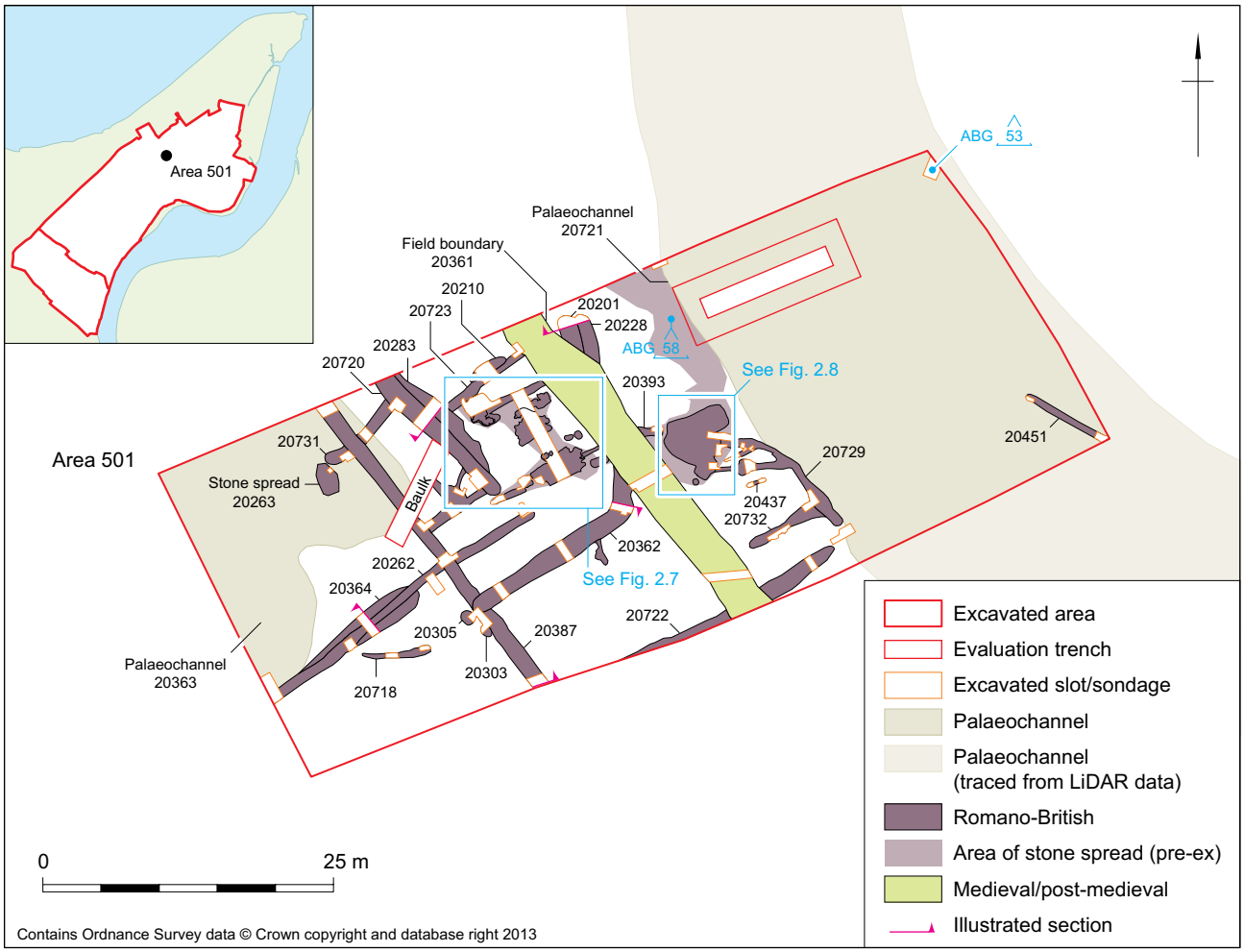

Figure 2.4 Area 501

was cut by medieval/post-medieval ditch 20073. The finds were largely residual and include a small amount of animal bone and a worked core of Blue Lias (ON 8) of possible Neolithic or Bronze Age date.

Area 501

The excavation area was located between two palaeochannels. Several phases of mid- to late Romano-British activity were identified, including a complex series of inter-cutting rectilinear ditches and gullies, a few postholes, and three discrete spreads of stone rubble (Fig. 2.4).

Palaeochannels 20363 and 20721

Romano-British activity at the site was largely confined to a narrow strip between palaeochannels 20363 and 20721 (P2 in Fig. 1.2, A). A 1.9 m deep trench through palaeochannel 20721 on the north-east side of the excavation area revealed a sequence of alluvial deposits (Pl. 2.2). The stratigraphic evidence indicates that the area was prone to flooding and alluviation. The orange-brown alluvium 20207,

Plate 2.2 Palaeochannel 20721

through which the archaeological features were cut, appeared to seal a thin grey-brown possible occupation deposit 20226 that overlay an earlier alluvium 20233. This sequence was noted in the edge of ditch 20201 on the north central side of the excavation area. The finds recovered from 20226 include three sherds of 2nd–4th-century pottery, a

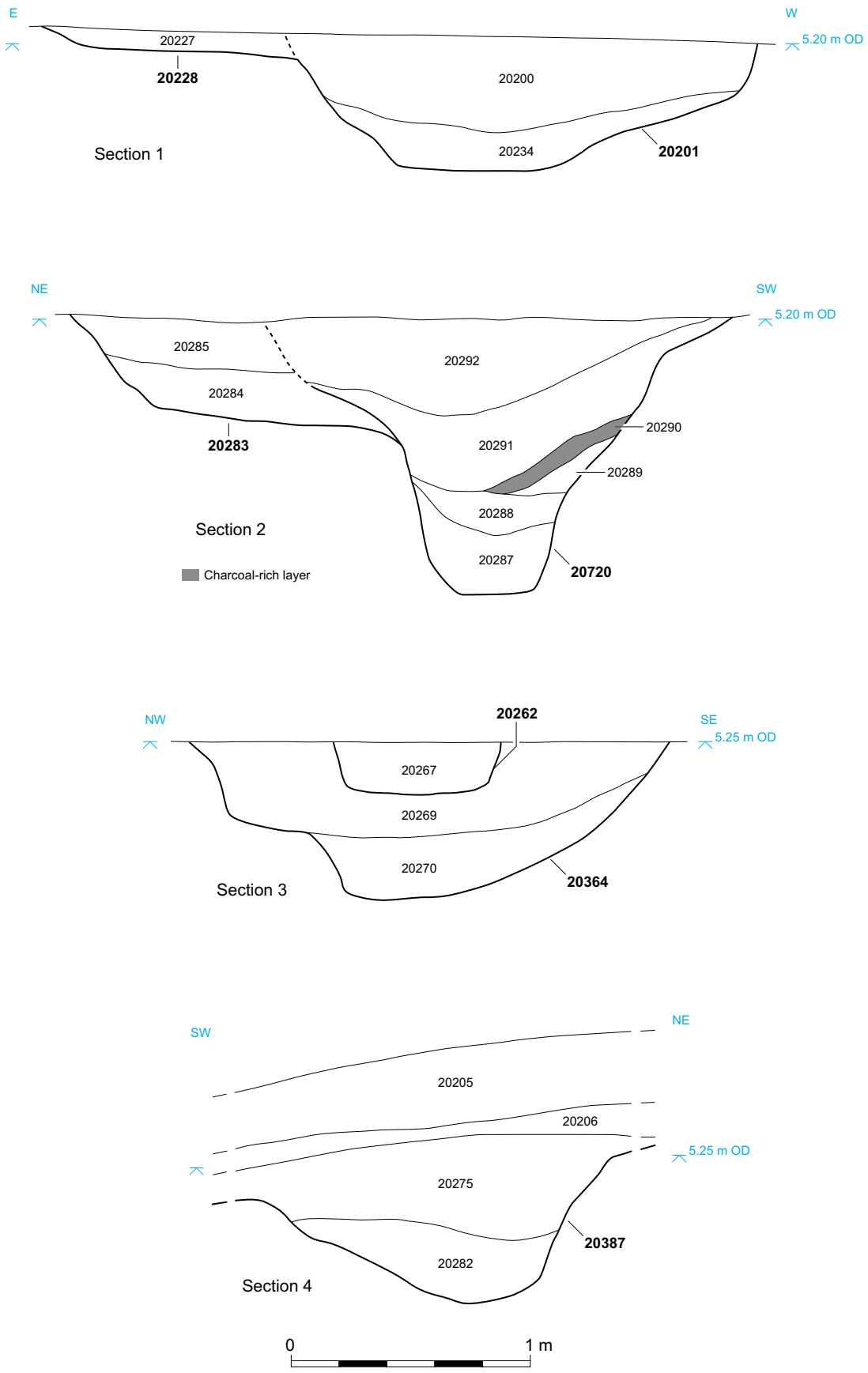

Figure 2.5 Section 1 ditch 20228 and recut 20201; section 2 ditch 20283 and recut 20720; section 3 ditch 20364 and recut 20262; section 4 ditch 20387

few small scraps of animal bone and fired clay. This evidence suggests that flood events were rapid and relatively short-lived, but severe enough to deposit significant amounts of alluvium over the area and infill drainage ditches. A small globular glass bead (ON 35) of Romano-British type in opaque blue was recovered from the surface of the natural alluvium adjacent to ditch 20228.

The palaeochannels are likely to have been visible in the landscape for a considerbale period of time and might even have acted as relic channels in extreme high tide events. The significance of the location of palaeochannels in later land divisions on the peninsula is suggested by their use as boundary markers. For example, during the medieval/post-medieval period, a large field boundary ditch 20361 was dug parallel to palaeochannel 20721. Similar examples have been noted elsewhere on the peninsula, for example, the enclosures in Areas 502 and 503.

It is difficult to assign a date range to the various phases of Romano-British activity described below due largely to the lack of large diagnostic groups of pottery from cut features. The ceramic evidence only provides a broad indication that the site was occupied during the mid- to late Romano-British period (ie, 2nd to 4th century) with the main focus of activity during the late 3rd to 4th century.

Phase 1

The earliest phase of activity is represented by a series of narrow, north-west to south-east and north-east to south-west aligned drainage gullies. Two of the gullies (20731 and 20451) cut through the upper fills of palaeochannels 20363 and 20721 respectively, and several were cut by the more regular field system of later Romano-British ditches, or partially sealed by the stone spreads (phase 5). The gullies were all fairly shallow, between 0.2 m and 0.8 m wide, and those adjacent to stone spread 20204 contained loosely packed stone linings that appeared to have been intended to facilitate the free flow of water. The gullies on the west side of the central area contained few finds, while those sealed by stone spreads 20204 and 20213 were relatively finds rich. Approximately 4 kg of mid- to late Romano-British pottery was recovered from these early features, including part of a vessel (ON 50) from 20719, a group of intercutting gullies on the west side of the area (see Fig. 2.7). The other finds comprise small amounts of fired clay, animal bone, a 3rd-/4th-century copper alloy coin (ON 55 from 20730), and a whetstone (ON 245 from 20210). The assemblage of fired clay includes two 'oven plates', one each from gullies 20729 and 20732 on the south-east side of the excavation area, and some possible briquetage from gully 20729.

Plate 2.3 Ditch 20364 and recut 20262

Plate 2.4 Ditch 20283 and recut 20720

Phase 2

Stratigraphically, ditches 20228, 20283 and 20364 are the earliest in the phase 2 sequence and the finds assemblage includes small amounts of broadly dated 2nd–4th-century pottery, animal bone and fired clay. Ditches 20228 and 20283 were between 0.9–1.4 m wide but only 0.2–0.4 m deep, and were both recut along roughly the same alignment as deeper features (ditches 20201 and 20720; Fig. 2.5, sections 1 and 2). Ditch 20364, on the other hand, which was 1.1 m wide and 0.66 m deep, was recut by a much narrow feature (20262; Fig. 2.5, section 3). The profile of 20364 (Pl. 2.3) was slightly irregular, being stepped on one side but more gently sloping on the other, and it contained two distinct clay fills. The initial silting of the feature appears to have been fairly gradual, but this was followed by a rapid deposition event, perhaps one caused by flooding.

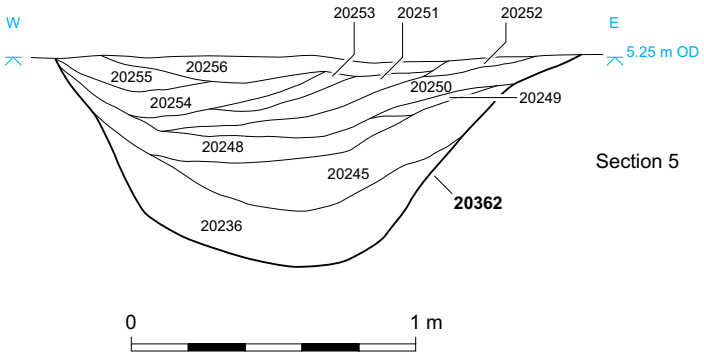

Figure 2.6 Ditch 20362

Plate 2.5 Ditch 20362

Phase 3

The ditches assigned to phase 3 are all quite different to each other. Ditch 20201 had a 1.3 m wide, U-shaped profile and was 0.6 m deep; it cut the southern edge of phase 2 ditch 20228 (Fig. 2.5, section 1) and terminated at the same point. The ditch was cut by medieval/post-medieval field boundary 20361. The finds assemblage includes late Romano-British pottery, animal bone, a small amount of fired clay (including possible briquetage), an iron nail, a scrap of lead (ON 15) and a 3rd-century copper alloy coin (ON 17). Ditch 20720 was a substantial feature with a 2 m wide, 1.15 m deep, V-shaped profile (Fig. 2.5, section 2; Pl. 2.4). The sequence of fills was also quite distinct and included deposits rich in charcoal and fired clay, separated by sterile silty clay. The finds assemblage includes 1.5 kg of late Romano-British pottery and a small amount of animal bone. Ditch 20262 (Fig. 2.5, section 3) was 0.75 m wide and 0.25 m deep, and contained a small amount of late Romano-British pottery (Fig. 3.2, 20), animal bone, fired clay and two iron nails (ONs 33 and 34). It extended further northwards than original ditch 20364 and terminated roughly parallel with the end of ditch 20720. A calibrated date of AD 130–340 (SUERC-42511, 1793±30 BP) was obtained from spelt wheat glume bases from the upper fill of ditch 20262.

Plate 2.6 Hobnailed shoe (ON 27) in situ

Phase 4

Ditch 20387, which was dug just a few metres to the south of phase 3 ditch 20720, through palaeochannel 20363 and ditch 20262, represents an attempt to reorganise the layout of the field system, albeit on much the same alignment. The ditch was orientated north-west to south-east, had a 1.4 m wide, U-shaped profile and was 0.5 m deep (Fig. 2.5, section 4). The finds assemblage includes late Romano-British pottery, animal bone and fired clay.

Phase 5

The final phase is represented by 20362, a substantial 2 m wide, 1 m deep ditch with a U-shaped profile, containing a complex sequence of fills including dump deposits rich in charred plant remains, charcoal and fired clay (Fig. 2.6, section 5; Pl. 2.5). The southern terminal of the ditch cut phase 4 ditch 20387, and to the north it appears to alter direction and continue towards the north-west, possibly terminating as ditch 20201, just before being truncated by medieval/post-medieval ditch 20361, although ditch 20361 cut through this area, removing any relationships. The finds assemblage from ditch 20362 includes 1.4 kg of late Romano-British pottery (Fig. 3.2, 17), 1 kg of animal bone, two iron nails, a copper alloy penannular brooch (ON 26; Fig. 3.6, 3), a hobnailed shoe (ON 27; Fig. 3.7; Pl. 2.6), a shale armlet fragment (ON 31) and a perforated oyster

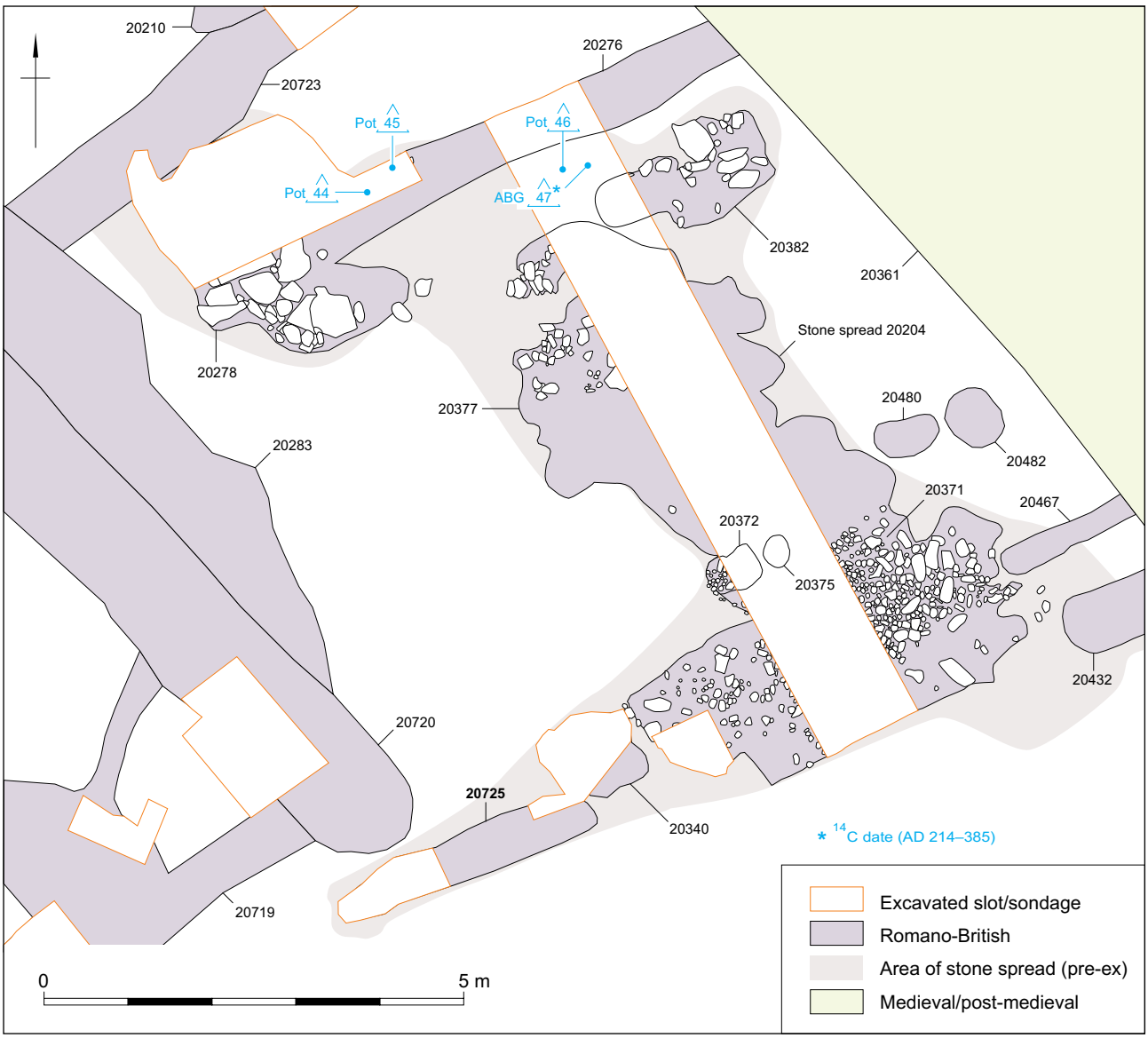

Figure 2.7 Stone spread 20204

shell (ON 36). Ditch 20722 was parallel with 20362 and is assumed to be broadly contemporary; it had a similar profile and sequence of dump deposits rich in charred plant remains. The assemblages of charred plant remains from these two features are dominated by fragments of cereal glume from the dehusking of hulled grain, mostly of spelt wheat, but also emmer wheat and barley. The evidence indicates crop-processing in the immediate vicinity (see Wyles, Chapter 4).

Stone spreads 20204, 20213 and 20263

The stone spreads were exposed directly below the ploughsoil on the western side of the excavation area; on the eastern side they were covered by a thin layer of alluvium. In places the spreads overlay the upper fills of nearby features, a general indication that they were relatively late in the sequence of activity.

The stone rubble spreads (Figs 2.7 and 2.8; Pl. 2.7) comprised moderate quantities of angular and sub-angular tabular blocks, and rounded cobbles. Stone types included relatively local Blue and White Lias, coarse Triassic red sandstone, Pennant Sandstone, quartzite and beach cobbles. No stones or cobbles showed evidence of mortar and no degraded mortar was evident in the surrounding feature fills; however the relative density of suitable building stone, and abundant large cobbles, suggest a masonry structure in the immediate vicinity. A small area of intact cobbled surface 20371 was identified on the south-east side of stone spread 20204 and thought to represent part of an exterior yard surface.

The finds assemblage includes a large amount (17.7 kg) of late Romano-British pottery (Fig. 3.2, 18; Fig. 3.3, 21), animal bone (6 kg) and fired clay (3 kg). The latter is probably mainly structural in

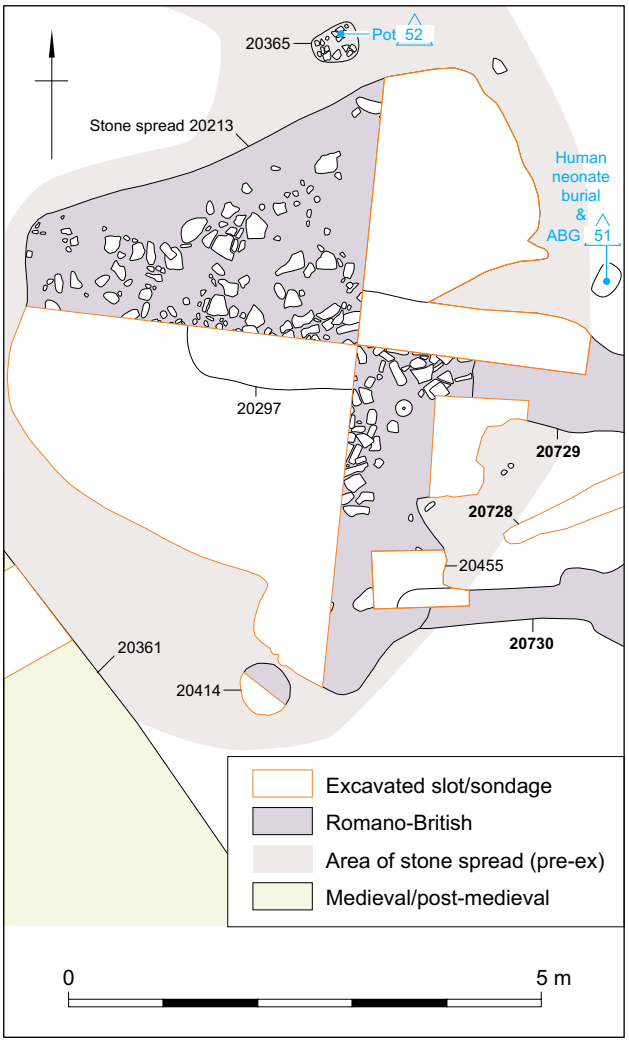

Figure 2.8 Stone spread 20213

Plate 2.7 Stone spread 20213

origin and most likely derived from hearth linings, or upstanding structures, but includes some possible briquetage.

The animal bone assemblage includes three associated bone groups (or ABGs). One from spread 20204, which comprises the skull, mandibles and foot bones from at least three sheep/goat (ABG 47) and two from 20213, a horse skull (ABG 58) and a number of post-cranial sheep/goat bones (ABG 51) associated with the partial remains of a human neonatal skeleton (Figs 2.7 and 2.8). A calibrated date of AD 230–390 (SUERC-42509, 1754±30 BP) was obtained for ABG 47. The sheep bones associated with the neonate were densely packed into a small area between the stones, indeed the presence of the neonate bones was only apparent when the bones were lifted. Other fragments of human bone, three pieces of skull from an adult, were recovered from stone spread 20263. The neonatal remains appear to have been *in situ*, while the skull fragments are likely to have been redeposited.

The other finds from these stone spreads include a number of nails, two copper alloy knee brooches (ONs 12 and 13; Fig. 3.6, 1, 2), a whetstone (ON 49), part of a saddle quern (ON 21), a red sandstone weight (ON 29; Pl. 2.8) and a stone roof tile (ON 41). The finds assemblage, therefore, includes personal and domestic items, structural material, as well as objects associated with particular activities such as grain processing, and possibly even fishing, assuming the weight (ON 29) was used to weight nets or lines.

Hollows 20278, 20340 and 20377

The stone spreads occupied three irregular, shallow (0.1 m deep) hollows, most probably natural depressions or areas of erosion in the surface of the alluvium (Fig. 2.7). Hollow 20278 lay on the west side of the spread and was 3.2 m in length by 1.3 m wide, while hollow 20340 was located adjacent to gully 20725, and was 0.7 m in diameter. The main hollow 20377 formed an irregular linear feature aligned north-west–south-east and was 7 m by between 3 m to 4.5 m wide.

Unphased features

A small number of discrete pits and postholes were identified across the site. They were all extremely shallow and could not be linked with a specific function or identifiable structural remains. They include two shallow pits, 20303 and 20305, in the south-west corner of the site, adjacent to the junction between ditches 20362 and 20387 (Fig. 2.4). Two other shallow pits were recorded on the north side of stone spread 20204, and a single pit on the south side of stone spread 20213. A sixth pit (20365) was identified immediately to the north of stone spread 20213. The feature was 0.76 m wide and 0.4 m deep,

and contained body sherds from a storage jar (ON 52; Fig. 3.3, 21) and a small amount of animal bone. The base of the storage jar was recovered from the stone spread (see above), indicating that the jar had been inverted when it was deposited.

Area E

A number of late Romano-British features and deposits were recorded in the southern part of Area E (Trenches 318, 321, 322 and 324; Fig. 2.3), and in the line of a new South Drain (Trench 327). The late Romano-British activity is located to the immediate east and south of a bend and fork in a palaeochannel (Fig. 1.2, A). In Trenches 317 and 319, small discrete areas of charcoal-rich deposits containing fired clay were recorded, and although undated, they are similar to other late Romano-British deposits and fills recorded in Trenches 321 and 327.

The late Romano-British features in this area comprised a number of north-east to south-west and north-west to south-east orientated ditches and gullies, and a charcoal-rich spread 32104. The most substantial feature was ditch 32403, which was 1.50 m wide and 0.80 m deep, with steeply sloping straight sides and a flat base. The fills contained four sherds of mid- to late Romano-British pottery and a single sherd of Middle–Late Iron Age pottery.

In Trench 327 were several ditches (32728, 32742, and 32753), as well as a group of inter-cutting features (32706, 32712, and 32716). The slightly varied alignment of these features indicates that they belong to different phases, however all contained late Romano-British pottery. The ditches were between 0.9–4.8 m wide and 0.1–1.1 m deep with moderate to steep straight or concave sides. The size and morphology of the ditches, along with the finds assemblages, suggests that these features represent field rather than settlement boundaries. However, the charcoal recovered from ditch 32743, which comprises a diverse range of taxa including oak, birch, hazel, wild cherry, hawthorn, field maple and ash, is more characteristic of domestic fires, indicating that a settlement lay close-by. The mollusc assemblage from the ditch includes species typical of both brackish and freshwater environments, while the terrestrial species are those commonly found in long damp grassland around the margins of fields and adjacent to waterlogged ditches (see Chapter 4).

Medieval

The most significant evidence of medieval occupation on the peninsula came from excavation Area 503, with limited further evidence from Areas 501 and 502, and Trenches 160, 164, 165, 166, and 169. The latter were targeted on four separate moated sites.

Plate 2.8 Loom/net weight (ON 29) in situ

Area 500

Two parallel NNW to SSE orientated ditches of presumed medieval date (no datable finds were recovered) cut across the north-west corner of the site (Fig. 2.1). The ditches were 9.5 m apart and cut palaeochannel 20108, following its course. They were in turn cut by north–south aligned post-medieval ditch 20073, which crossed the west side of the site.

Area 501

A number of the late Romano-British features identified in Area 501 were cut by medieval/post-medieval field boundary ditch 20361, which bisected the site (Fig. 2.4). A few sherds of 13th-/14th-century pottery were recovered from stone spread 20213, and suggest that the ditch might date to this period. Finds from the ditch include a residual late 3rd-century Roman coin (ON 16).

Area 502

The excavation area targeted the north-eastern corner of a sub-square enclosure or moated site at the eastern end of the peninsula adjacent to P3, and 200 m to the north-west of Area 503 (Figs 1.1 and 1.2, A and B).

Phase 1: 11th–13th centuries

The earliest phase of the enclosure was represented by 20567 (Fig. 2.9), a 1.5 m wide and 0.3 m deep, north-west to south-east orientated ditch, that

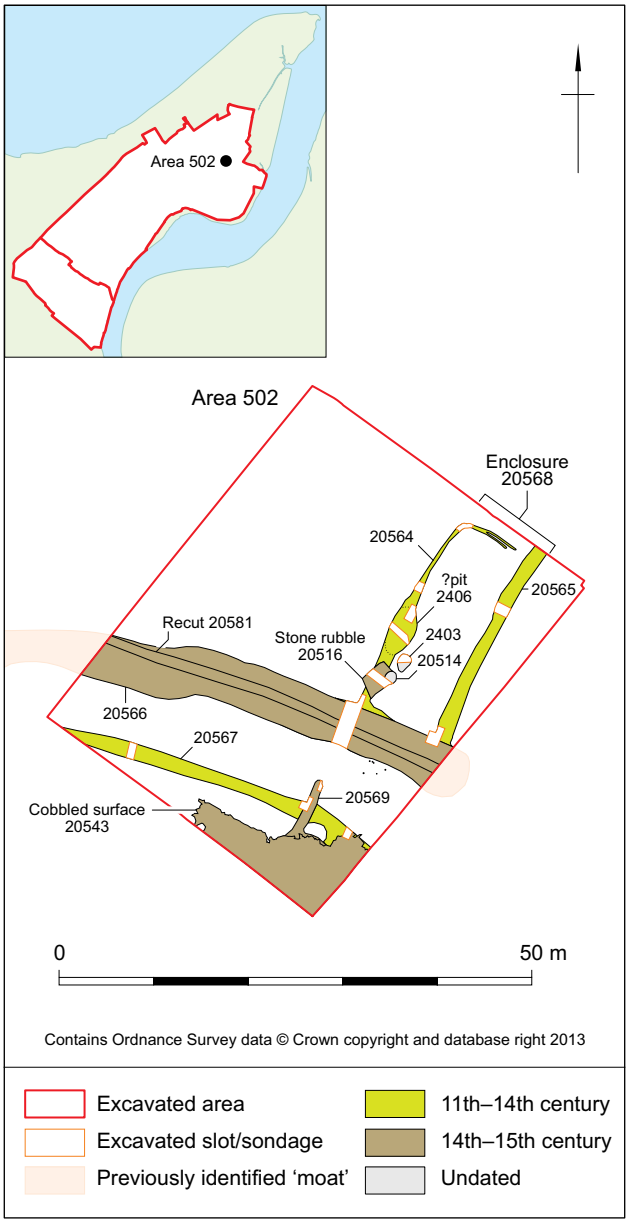

Figure 2.9 Area 502

Plate 2.9 Cobbled surface 20543, and ditches 20567 and 20566

contained a small amount of 11th–13th-century pottery, animal bone, fired clay and fragments of burnt stone. The ditch was cut by gully 20569 and partly overlain by cobbled surface 20543, both of which contained late medieval pottery.

Ditches 20564 and 20565, to the north-east of 20567, enclosed an area of approximately 22 m by 8 m, and together formed a small plot or stock-enclosure, 20568. Ditch 20565 was 1.1 m wide throughout its length, and was 0.3 m deep, with a rounded terminal, while the width and depth of ditch 20564 varied considerable from little more than a narrow, shallow gully at its north end, to 1.8 m wide and 0.6 m deep at its south end. Both ditches contained small amounts of 11th–13th-century pottery, and some animal bone and fired clay. Ditch 20564 was closely aligned with ditch 20569 to the south-west, but the latter contained 14th-/15th-century pottery and is unlikely to have been contemporaneous.

Possible pit 2406 cut enclosure ditch 20564 and contained 13th-/14th-century pottery. Two further small undated pits, 2403 and 20514, were located within the enclosure.

Phase 2: 14th–15th centuries

Approximately 7 m to the north of phase 1 ditch 20567, and parallel with it, was ditch 20566, representing a late medieval phase of modification to the enclosure. The ditch was 4.8 m wide and 1 m deep, contained a sequence of light blue/grey gleyed clay fills, and was recut by a smaller ditch, 20581, shortly afterwards (pottery from both 20566 and 20581 was very similar in character). This sequence of ditches follows the course of an earlier palaeochannel (see P4 Fig. 1.2, A).

In the southern corner of the excavation area, and partly overlying ditches 20567 and 20569, was cobbled surface 20543 (Pl. 2.9). The surface was composed of Blue Lias, red sandstone, limestone and rare quartzite cobbles, and probably represents a yard surface. A few large, roughly dressed blocks of Blue Lias and red sandstone were scattered throughout 20543, suggesting the existence of an earlier masonry structure in the vicinity. Patches of stones to the north-east of 20543 suggest that the surface was once more extensive and probably extended as far as ditch 20566. There is also some evidence of a similar surface to the north of ditch 20566, as suggested by a discrete patch of stone rubble 20516, overlying the south-western end of ditch 20564.

Area 503

The excavation targeted a large sub-square enclosure or 'moated' site at the eastern end of the peninsula, approximately 200 m to the south-east of Area 502

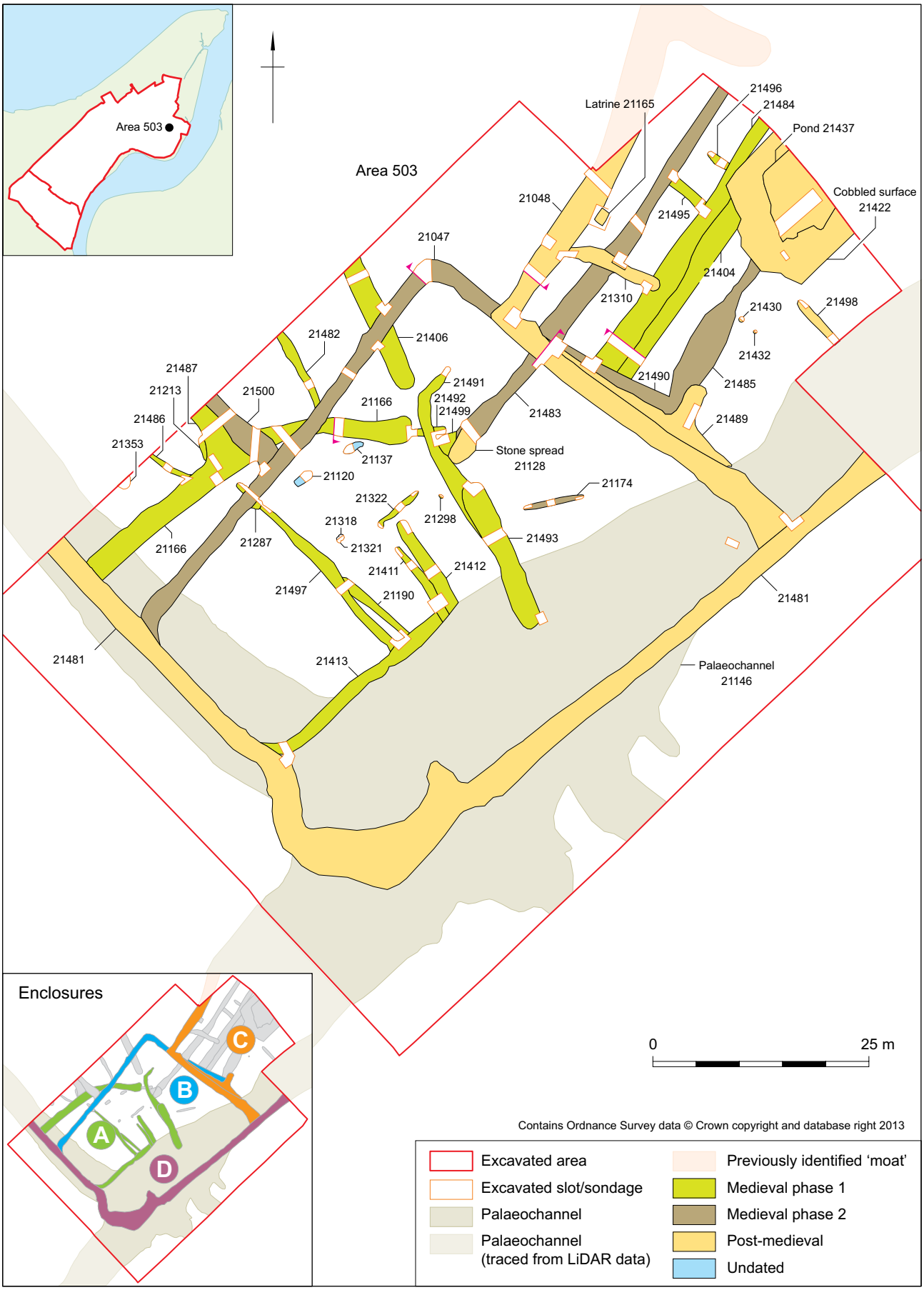

Figure 2.10 Area 503

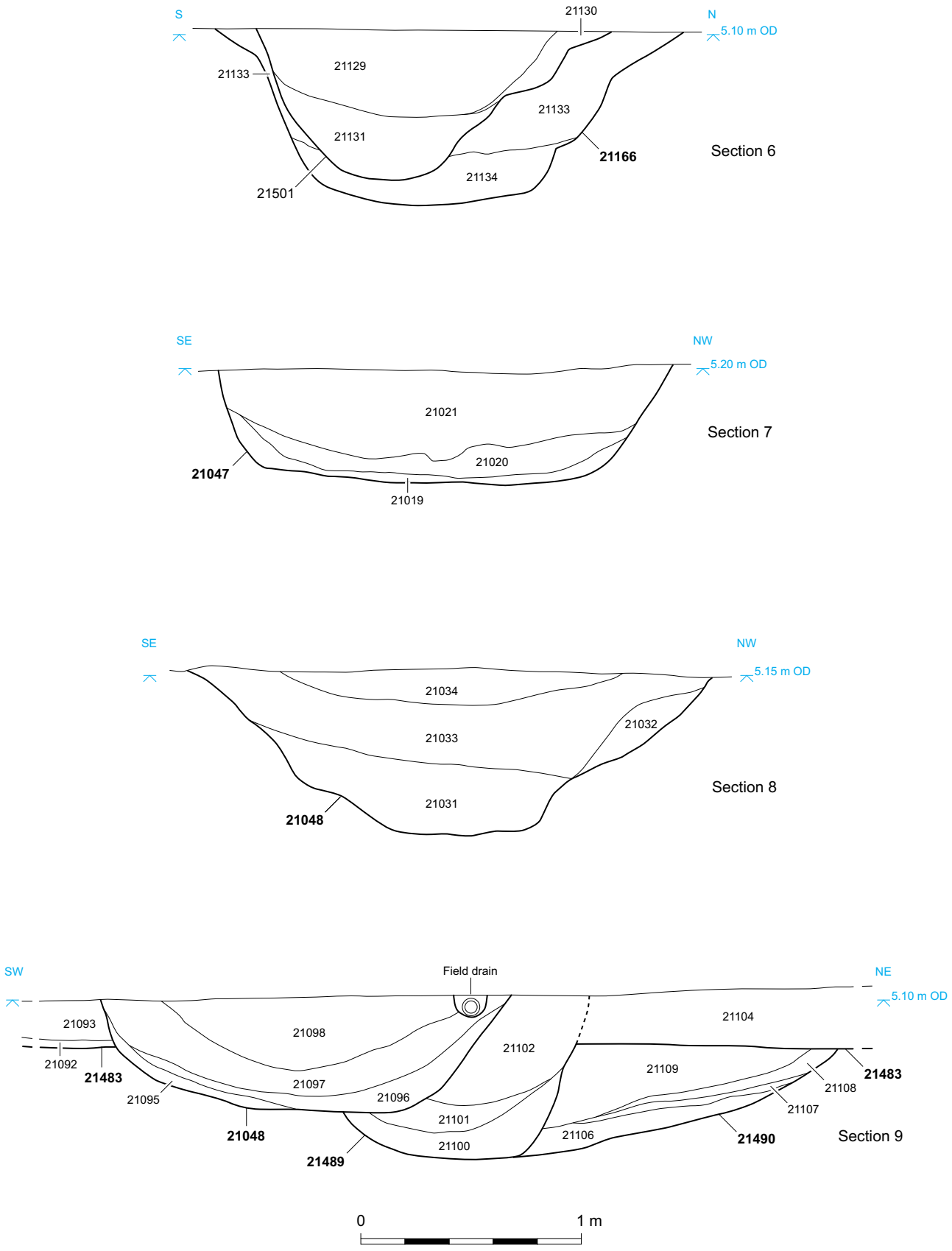

Figure 2.11 Section 6 Enclosure A ditch 21166, recut 21501; Section 7 Enclosure B ditch 21047; Section 8 Enclosure C ditch 21048; Section 9 Enclosure B and C ditches 21490, 21489 and 21048, and trackway ditch 21483

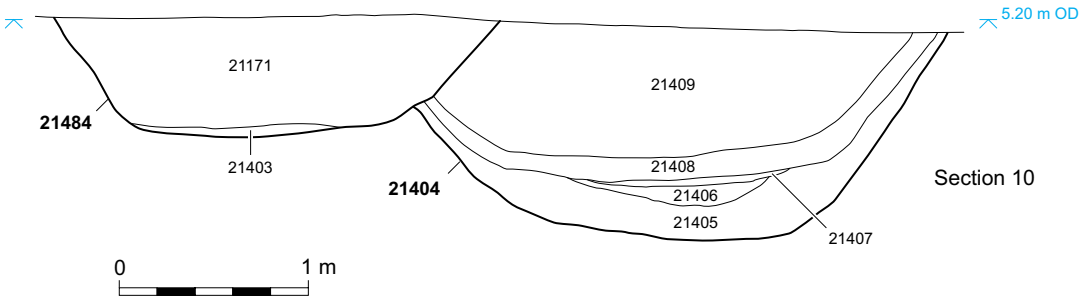

Figure 2.12 Section 10 trackway ditches 21404 and recut 21484

and approximately 100 m to the north-west of the enclosure investigated by Trench 169 (Figs 1.1 and 1.2). The enclosure was located at a confluence in the natural creek/palaeochannel system (P4 in Fig. 1.2, A) and this influenced the layout of some of the ditches (Fig. 2.10).

Evidence for medieval activity includes a series of intercutting gullies and ditches and a few small pits or postholes, most of which were concentrated around the confluence in palaeochannel 21146. The ditches formed an enclosure, which was enlarged at least once during the medieval period. With the exception of the few discrete features, there was limited evidence for domestic occupation within the enclosure. A possible trackway led away from the enclosure towards the north-east, while to the north-west there was evidence of a field system.

Phase 1 – late 10th–13th century

Gullies

Most of the gullies were 0.6–1.3 m wide and 0.2–0.3 m deep (Fig. 2.12, section 10), and orientated north-west to south-east. A few were recut on the same alignment, either by another gully (eg, 21190 by 21497), or by a more substantial ditch (eg, 21492 by 21166). The evidence suggests that the gullies formed early elements of Enclosure A (see below)

Few finds were recovered from these features and the pottery dates are mostly late 10th to 12th century, and broadly comparable to the dates for the stratigraphically later enclosure A. Two knife blades (ONs 201 and 202) and a whetstone (ON 224) were, however, recovered from gully 21482.

The mollusc assemblage from gully 21412 is dominated by brackish species including a semi-marine species typically found around the high-tide mark. This evidence suggests that quite significant marine inundations occurred on this part of the peninsula during the medieval period.

Enclosure A

Ditches 21166 and 21413 formed the first phase of the enclosure. The north-east to south-west orientated ditches were 30 m apart and lay in the south-west part of the site (Fig. 2.10). Both ditches cut palaeochannel 21146, and ditch 21166 (Fig. 2.11, section 6), which had been recut (21501) at its north-east end, was cut by the Phase 2 enclosure ditch 21047, ditch 21500 (Fig. 2.11, section 6) and post-medieval (Phase 3) enclosure ditch 21481; the latter also cut ditch 21413. The east side of Enclosure A was formed by 21491, a separate north-west–south-east orientated ditch, 1.5 m wide and 0.3 m deep, which cut gully 21492 and trackway ditch 21499 (see below), and was later recut as 21493, a 2.3 m wide and 0.7 m deep ditch segment that also cut palaeochannel 21146. The west side of Enclosure A was cut by post-medieval Enclosure D, hence it is unclear if ditches 21166 and 21413 formed a continuous circuit, or if a separate north-west–south-east aligned ditch formed this side. Regardless of this Enclosure A would have formed a sub-rectangular area of approximately 1500 m².

The ditches probably flooded on a seasonal basis, as suggested by changes in the mollusc assemblage from freshwater to brackish-tolerant species (see Wyles, Chapter 4). The finds assemblage includes late 10th–12th-century pottery (2.4 kg; Fig. 3.4, 2, 8), animal bone (2.7 kg) and fired clay. A date of cal AD 1020–1220 (SUERC-42512, 911±30 BP) was obtained from free-threshing wheat grains recovered from the lower fill (21134) of enclosure ditch 21166 (see Fig. 2.11, section 6).

Ditch 21412 cut the north-east end of ditch 21413, and formed a later addition to Enclosure A. The north-west–south-east orientated ditch, which was 1.8 m wide and 0.7 m deep, and was later recut as a shallow (0.3 m), narrow (1 m) gully 21411. The small finds assemblage includes 11th–13th-century pottery, animal bone, and fired clay.

Ditches 21493 and 21412 appear to be broadly contemporary, they are on the same alignment, and have similar deep U-shaped profiles. As such they appear to define a possible entranceway in the south-east corner of Enclosure A.

Plate 2.10 Gully 21322 showing deposits of charred plant remains and charcoal

Plate 2.11 Pit 21353 showing charcoal-rich deposits

Discrete features

Structural evidence within the enclosure was scarce but included gully 21322 and a few pits (21120, 21137 and 21287) and postholes (21298, 21318 and 21321). Gully 21322 was orientated slighly north-east–south-west, and contained a charcoal-rich fill, similar to postholes 21318 and 21321 within the enclosure and pit 21353 to the north-west of the enclosure (see below). The charcoal from gully 21322 comprised mainly oak, probably derived from domestic fires, while the assemblage of charred plant remains was dominated by free-threshing wheat grains (Pl. 2.10).

The finds assemblage from these features included sherds of late 10th–13th-century pottery and a small amount of animal bone. A radiocarbon date of cal AD 1010–1160 (SUERC-42513, 956±30 BP) was obtained from free-threshing wheat grains recovered from gully 21322, confirming that these features are broadly contemporary with Enclosure A.

The three postholes in the central area (21298, 21318 and 21321) were 0.5–0.6 m in diameter and contained charcoal-rich fills that included charred wheat grains, similar to gully 21322.

Pits 21120, 21137 and 21287 were a short distance apart and on roughly the same north-east to south-west alignment within the enclosure. A fourth pit (21353) in the south-west corner of the site, outside Enclosure A, contained multiple layers of alternating charcoal-rich deposits and fine silty clay bands (Pl. 2.11). The former contained large amounts of grain from free-threshing wheat and oats, as well as celtic bean and a range of weed seeds.

Field system and trackway

Ditches 21046 and 21487 appear to have been contemporaneous with the early enclosure and possibly formed a field system, or extension to the enclosure, to the north-west. Ditch 21487 extended from the north-west side of 21166, while ditch 21046 terminated in close proximity to the eastern end of 21166, perhaps indicating that these features were open at the same time. A small amount of late 10th–13th-century pottery, animal bone and fired clay was recovered from ditch 21046.

Ditch 21499 appeared to extend to the north-east of Enclosure A, from ditch 21491, and to have been later recut by ditch 21483. It is assumed to have extended further to the north-east, parallel with ditches 21404 and 21484 (Fig. 2.12, section 10). If contemporary, then these features may have formed a 5 m wide trackway on the north-east of the enclosure. Ditches 21404 and 21484 did not, however, extend as far south-west as ditch 21499; all three were cut by phase 3 enclosure ditch 21048. The finds from the trackway ditches included a small quantity of animal bone and pottery, and a bone point or awl (ON 246).

Phase 2 – 14th–15th century

Enclosure B and associated ditches

Phase 2 saw a reorganisation of the ditch system with the construction of a regular, sub-square ditched enclosure 21047 (Fig. 2.11, section 7) of approximately 2400 m² with few internal features (Fig. 2.10). The layout is more regular than the 'organic' form of phase 1 Enclosure A, though the location and alignment of associated ditches was similar, with additional ditches to the north-west (eg, 21500) and north-east (eg, 21485, 21490; Figs 2.10 and 2.11, section 9). The main enclosure ditch was 1.5–2 m wide and 0.60 m deep, with fills characterised by redeposited/eroded natural alluvium from the ditch sides and gleyed, blue-grey clay deposits towards the base. The finds assemblage included 14th–16th-century pottery, animal bone, fired clay and marine shell.

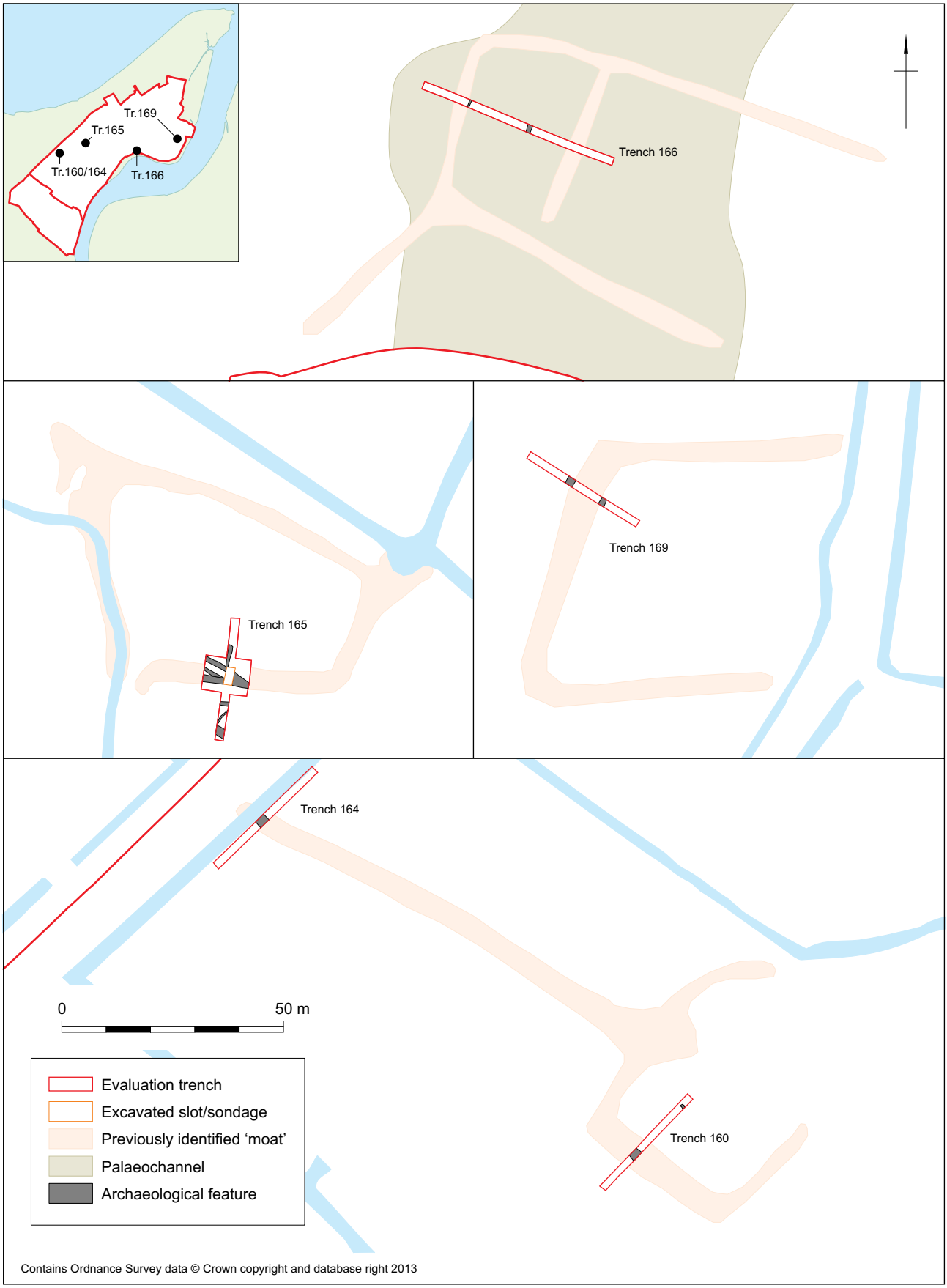

Figure 2.13 Plans of trenches 160, 164, 165, 166 and 169

Plate 2.12 Cobbled surface 16502

Ditch 21485, together with ditch 21483, some 12.5 m to the south-east, formed a small rectangular enclosure to the north-east of Enclosure B. Ditch 21483 followed the same projected alignment as phase 1 trackway ditch 21499 and was a slightly later addition to the phase 2 layout since it cut enclosure ditch 21490 (Fig. 2.11, section 9), forming a small internal division in the north-east corner.

'Moated' Sites

Evaluation Trenches 160 and 164 were targeted to investigate earthwork enclosure SHER 2034 (Fig. 1.2, B). Trench 160 was located across the south-western side of the enclosure ditch, while 164 was dug across a linear earthwork connected to the enclosure (Fig. 2.13). Both trenches revealed the ditches on which they were targeted. Enclosure ditch 16005 was 3 m wide and 1.2 m deep, and was assocated with a small area of stone rubble 16004. This lay on the north-east side of the ditch and probably derived from a stone structure within the enclosure. No datable finds were recovered from the ditch, but a few sherds of late 10th–12th-century pottery were recovered from the topsoil overlying the stone rubble.

Trench 165 was targeted across the southern side of earthwork enclosure SHER 2036 (Fig. 1.2, B). In the centre of the trench, three east-west aligned, intercutting ditches (16519, 16523 and 16531) were revealed (Fig. 2.13). These features were broadly coincident with the enclosure ditch and indicate that it was recut on at least two occasions. Small amounts of pottery (11th–13th century in ditches 16519 and 16531, 11th–16th century in ditch 16523), animal bone and fired clay were recovered from the ditches. On the interior side of the enclosure ditches was a north-south aligned ditch, 16512, which was overlain by cobbled surface 16502. This surface consisted of predominantly north-south to east-west aligned stones of Blue Lias, red sandstone and beach cobbles, and areas of small rounded pebbles. The areas of small stones were densely packed and may have been repairs to the cobbled surface, while the large, regular-shaped slabs appeared to be re-used masonry blocks (Pl. 2.12). The eastern and north-western edges of the cobbled surface were exposed within the trench, suggesting perhaps that the surface formed a 2.5 m wide, north-east aligned path from the edge of the ditch towards the interior of the enclosure. Medieval pottery (spanning the medieval period from late 10th/11th century to 14th/15th century) and fired clay was recovered during surface cleaning over cobbled surface 16502.

Trench 166 was targeted across two ditches forming part of a small enclosure with associated field systems (Fig. 2.13). Two NNE to SSW orientated ditches were revealed and these corresponded closely with the earthworks. Ditch 16605, which formed the western side of the enclosure, was 1.6 m wide and 0.5 m deep, while ditch 16607, which formed the enclosure's eastern side, was 1.85 m wide and 0.7 m deep. No datable finds were recovered from either feature, but the enclosure is assumed to have been broadly contemporaneous with other, similar earthworks in the immediate area.

The moat ditch (16814) identified in Trench 168 (Fig. 2.2), on the east side of the peninsula, adjacent to Area 500, cut through a Middle–Late Iron Age deposit (16816) and was itself recut on two separate occasions as 16818 and 16824 (not illustrated). The ditches had wide U-shaped profiles and were over 1.2 m deep.

Trench 169, to the south-east of Area 503, was targeted on the north-west side of a large square enclosure (Fig. 2.13). The trench revealed two north-east to south-west orientated ditches. At the north-west end of the trench was ditch 16904, which was over 2.5 m wide and 1 m deep, and roughly corresponded with the enclosure ditch. Approximately 7.5 m to the south-east of 16904, within the interior of the enclosure, was ditch 16907. This feature was 1.7 m wide and 1.1 m deep, and had a wide U-shaped profile. A sherd of 14th-/15th-century pottery was recovered from the upper fill of ditch 16907, but otherwise the

features are undated though assumed to have been broadly contemporaneous with the other, medieval enclosures.

Post-medieval

With the exception of ditch 20073 in Area 500 (Fig. 2.1), and a few stray finds from other areas, most of the archaeological evidence for this period comes from Area 503. The post-medieval archaeology revealed in this location represents a later, and final reorganisation of the medieval enclosures (A – phase 1, and B – phase 2; see above) and made use of the existing line of the palaeochannel (21146), which must still have been visible within the landscape.

Area 503

Phase 3 – 16th–17th century

Enclosure C

The north-eastern side of enclosure 21047 was recut twice during this period (Figs 2.10 and 2.11, section 9). The first recut (21489) included a short 'off-shoot' at its south-east end (Pl. 2.13), from which were recovered two complete pottery vessels, one of late 15th-/16th-century date (ON 222; Fig. 3.5, 12) and the other 16th-/17th-century (ON 207). A lead alloy spoon (ON 220; Fig. 3.6, 5) also came from this feature.

The second recut, 21048, was more extensive, and followed the line of 21047 for part of its length before turning sharply to the north-east to form a second, smaller enclosure to the north-east of phase 2 Enclosure B. The finds assemblage from ditch 21048 includes post-medieval pottery (2 kg), animal bone (1.5 kg), slag (501 g), ceramic building material (CBM), a piece of clay pipe, a nail, a whetstone (ON 218), a copper alloy buckle (ON 203) and one of three imported polychrome glass beads (ON 208; Fig. 3.6, 6; Pl. 3.1).

Features within Enclosure C

Within the enclosure was a pond (21437) surrounded by cobbled surface 21422 (Pl. 2.14). The pond was filled with a sequence of waterlain deposits from which were recovered a few sherds of post-medieval pottery (probably 16th-/17th-century). The cobbled surface was similar to that recorded in Area 502, and was composed of rounded quartz beach pebbles, angular fragments of Blue Lias and occasional red sandstone blocks (Pl. 2.15). The inner edge of 21422 sloped down into the pond. The surface was well constructed, with densely packed stones in a variety of sizes; there were some areas where similar sized

Plate 2.13 Ditches 21048, 21489 and 21485

Plate 2.14 Pond 21437 and cobbled surface 21422 under excavation

Plate 2.15 Cobbled surface 21422

Plate 2.16 Latrine pit 21165 and ditch 21048

Plate 2.17 Internal view of latrine pit 21165 showing construction and sloping floor

stones had been neatly laid on edge and other areas where the arrangement was more random. A small iron buckle (ON 227) was recovered from the surface of 21422.

A well-built, partly upstanding masonry garderobe or latrine pit (21165) was constructed over the edge of the western side of phase 3 enclosure ditch 21048 (Pl. 2.16). The masonry structure was built within a straight-sided, flat-bottomed rectangular construction cut (21087) adjacent to the internal (ie, eastern) edge of the enclosure ditch. The walls of the latrine were up to 0.6 m high and constructed of roughly hewn blocks of Blue Lias and red sandstone, with the occasional rounded quartz beach cobble. On the western (ditch) side was a 0.64 m wide by 0.38 m high opening, capped with a red sandstone lintel, and the base of the latrine was lined with red sandstone slabs that sloped down towards the ditch side opening (Pl. 2.17). Green cess-like staining was noted on the red sandstone slabs forming the base of the latrine and in the lower fill of enclosure ditch 21048, confirming that these two features were contemporaneous and that the latrine had been positioned so that it drained directly into the ditch. Stone rubble was found near the base of the enclosure ditch adjacent to the latrine, a further indication that these features were in contemporaneous use.

The fill of the construction cut for the latrine included wood charcoal, and it can be noted that insect tunnels in the charcoal indicate that the wood originally derived from a structure or artefact (eg, furniture; see Challinor, Chapter 4). Finds from the latrine construction cut included a few sherds of 14th–16th-century pottery, almost 1 kg of animal bone (mostly 'light' tanning waste), a lead pilgrim's ampulla, probably 14th- or 15th-century in date (ON 238; Fig. 3.6, 4, Pl. 3.2), and an Anglo-Gallic (*c*. 1399–1453) silver coin (ON 216). These objects suggest a date somewhere in the first half of the 15th century for the latrine's construction, but the ditch into which the latrine drained (21048) produced 16th-/17th-century pottery, as did its precursor, 21489. The ampulla and coin may, therefore, have been curated objects, possibly deliberately incorporated in the construction cut.

Three postholes (21175, 21177 and 21231) were recorded in the base of enclosure ditch 21048 adjacent to latrine pit 21165. The postholes lay along the western side of the ditch and were sealed by its primary fill. They probably formed part of a wooden structure associated with the latrine pit, perhaps some sort of screen or barrier.

Two further postholes or small pits were recorded in the south-east part of the enclosure. Both features were small but had similar profiles (ie, straight sides and a concave base) and were sub-oval in plan. A few sherds of post-medieval pottery were recovered from both features, and 21432 also contained three residual sherds of medieval pottery.

Enclosure D

The final phase in the sequence is represented by ditch 21481, approximately 2.5 m wide, which was dug along the line of palaeochannel 21146 to the south-east and south-west (Fig. 2.10), and no doubt followed the outer circuit of the earlier enclosure ditches (see above). Ditch 21481 formed the southern corner of a large enclosure which extended beyond the limits of the excavation area and unfortunately, due to severe flooding while the excavation was ongoing, no sections could be excavated through this feature. Seven sherds of pottery were recovered from the surface of the ditch fill, none obviously later than 16th-/17th-century, ie, the digging of Encloure D may have followed relatively swiftly after Enclosure C.

Chapter 3
The Finds

Prehistoric Pottery

by Elina Brook and Rachael Seager Smith

The later prehistoric pottery assemblage (530 sherds, 5279 g) is predominantly dated to the Middle–Late Iron Age (*c.* 400 BC–AD 43). Most of this material was retrieved from Area 500 (approximately 89% by sherd count), with considerably smaller quantities recovered from a number of evaluation trenches, especially Trenches 168 and 327. Of the 42 contexts containing prehistoric ceramics, only six contained more than 25 sherds, whilst 22 contexts produced five sherds or less. Most sherds are of small to medium size, reflected by a mean sherd weight of 10 g, and a significant proportion have suffered high degrees of abrasion on surfaces and broken edges.

Methodology

The collection has been subjected to detailed fabric and form analysis, following the standard Wessex Archaeology recording system for pottery (Morris 1994), which is in accordance with the current guidelines for later prehistoric pottery (Prehistoric Ceramics Research Group (PCRG) 2010). Each sherd was examined using a x10 power binocular microscope and assigned to a fabric group based on the most frequent or most obvious inclusion type. Featured sherds were assigned a form type, although the range of form and rim types represented was very limited, and there were few examples that could be dated closely. Other variables (eg, surface treatment, decoration, firing and evidence of use) were also recorded.

Results

Fabrics

Ten fabric groups were identified based on the macroscopic observation of the predominant inclusion type. These are listed below, with detailed descriptions contained in Appendix 1. The breakdown of ceramics by fabric group is given in Table 3.1.

Most of these wares are probably derived from a variety of relatively local sources, with some material coming from slightly further afield. Overall, the range is similar to that seen at Huntworth (Mepham 2008), Cheddar Reservoir (Wessex Archaeology 2013a) and along the Cheddar to Brent Knoll Water Pipeline (Brook and Seager Smith forthcoming).

The broad rock and quartz sand fabric groups comprise the majority of the assemblage: 48% by sherd count for the quartz sand group and 46% for the rock-tempered material. Within these groups, the most common fabric (Q1) tempered with sandstone and sand is comparable with Peacock's 'Glastonbury ware' fabric Group 2 (1969, 46–7) which has a source in the Beacon Hill area near Shepton Mallet in the Mendip Hills. These wares (now more correctly termed 'South-western decorated style') have also been identified at Ham Hill (Morris 1987, 34; 1998, 94, fabric R4). All the other quartz sand fabrics are represented by a total of just 11 sherds. One (Q2) contained sparse organic temper, while Q3 was a soft, finer sandy fabric and the last (Q4) also contained sparse, moderately sorted grog-temper. All these inclusion types would have been available locally. The sand and grog-tempered fabric (Q4) is represented by a single plain body sherd thought to be of Late Iron Age/early Romano-British date.

The rock-tempered fabric group is dominated by fabric R3, even allowing for the fact that 120 of these sherds derive from a single vessel (ON 3). This fabric

Table 3.1 Quantification of later prehistoric pottery fabric types by number and weight (g)

Fabric code	*No. of sherds*	*Weight (g)*	*% sherds*	*MSW (g)*
Calcareous				
C1	30	374	5.6	12.5
S1	2	5	0.4	2.5
Quartz sand				
Q1	243	1756	45.8	7.2
Q2	7	49	1.3	7.0
Q3	3	4	0.6	1.3
Q4	1	13	0.2	13
Rock				
R1	36	673	6.8	18.7
R2	3	19	0.6	6.3
R3	190	2231	35.9	11.7
R4	15	155	2.8	10.3
Total	*530*	*5279*		*10.0*

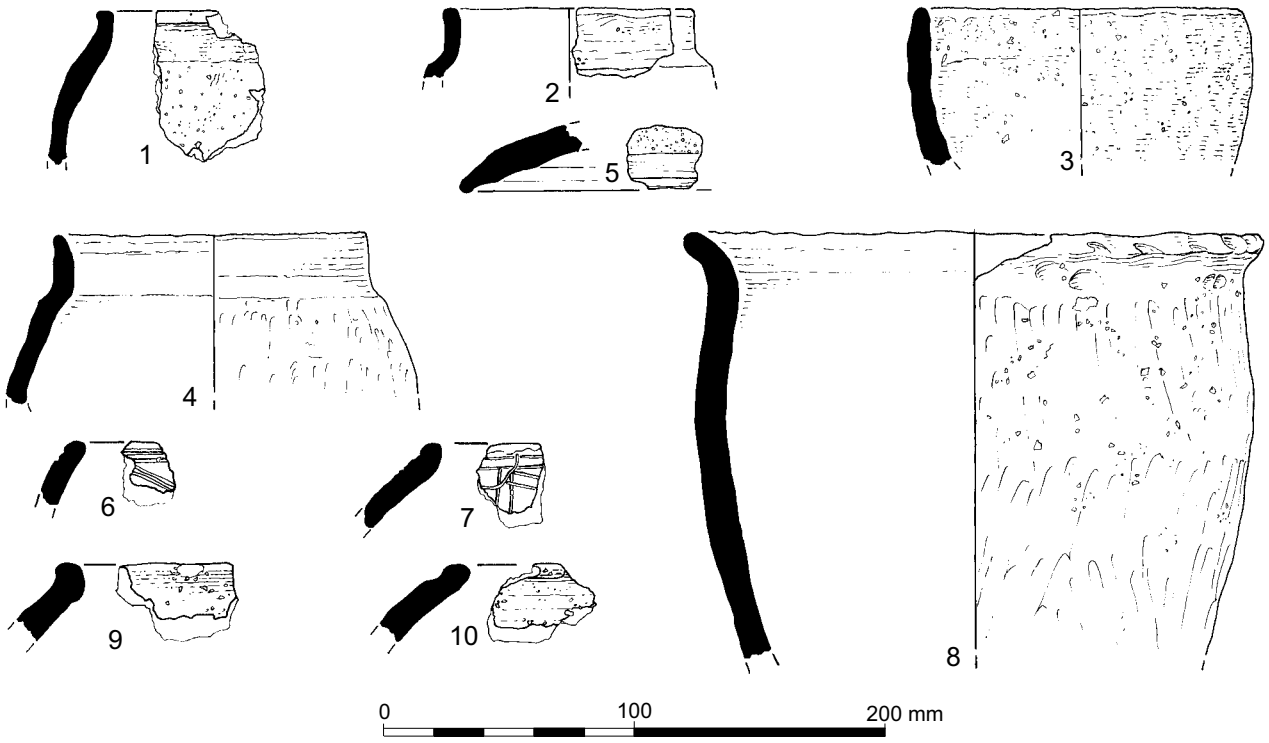

Figure 3.1 Iron Age pottery (nos 1–10)

type contained (as yet) unidentified rock fragments and black grains, possibly some sort of metasediment such as shale. Similar black grains were also noted in far smaller quantities in fabrics Q1 and Q2, perhaps suggesting a similar source, possibly in the area around Norton Fitzwarren where shale-tempered fabrics were the predominant group during the Middle Iron Age (Woodward 1989, 51). Although represented by just three undiagnostic body sherds, a similar source is possible for fabric R2. The distinctive soft, flaky, often speckled inclusions present in this ware probably derived from Permian lava or Trap deposits, and have also been noted in the Romano-British South-western greyware fabric A (see below) which is thought to be from the Norton Fitzwarren area (Timby 1989, 54).

The second most common rock-tempered fabric (R1) contained sparse, currently unidentified, coarse rock fragments along with coarse sand; 15 of the 36 sherds in this fabric were from a single straight-sided jar (ON 5, see below). Rock-tempered fabric R4 was notable for the rarity of its coarse components and contained only rare sandstone and quartz sand within a fairly silty clay matrix; all the sherds came from a single vessel.

Two calcareous fabrics were identified. One (C1) contained moderate well-sorted inclusions, probably of limestone, while the other contained fossil shell (S1). Similar fabrics containing limestone, calcite or fossil shell, are common throughout the Iron Age in the locality, occurring at Whitegate Farm, Bleadon (Woodward 2007, 43, fabrics F1, F2 and F4) and Ham Hill (Morris 1987, 32, shelly fabric B; 1998, 94, S1), whilst at Dibble's Farm, Christon they dominated the assemblage (Morris 1988, 31, fabric 1, table 1), and at Cadbury Castle shell-tempered fabrics were particularly prevalent during the Middle Iron Age (Woodward and Bevan 2000, 27, ceramic assemblages 6 and 7, fabric c).

Vessel Forms

Ten rim forms were defined, and the quantities present by fabric type are presented in Table 3.2.

No complete profiles were present and rims were often broken at the shoulder or just below the rim. This limits the amount that can be said about this assemblage and makes it particularly difficult to confidently identify comparisons with other site collections. As a response to this, rim fragments that were not large enough to identify to a more specific type were placed in a general category (form R). Overall, only 10 rims survived in a measurable condition; all are likely to be from small to medium sized vessels (diameters varied from 100–140 mm), probably jars.

Simple upright rims were the most common (forms R1, R4 and R6; Fig. 3.1, 1–3), although their shape varied, some having slightly flattened tops

Table 3.2 Middle–Late Iron Age vessel forms by fabric type (number of rim sherds)

Vessel form		*C1*	*Q1*	*Q2*	*R1*	*R3*	*R4*	*Total*
R	Rim, uncertain form	–	7	1	–	–	–	*8*
R1	Short upright rim	–	11	–	–	–	–	*11*
R2	Lid, slightly inturned	2	–	–	–	–	–	*2*
R3	Straight-sided jar, everted rim	–	–	–	5	–	–	*5*
R4	Upright rim, sharp angle at shoulder	–	1	–	–	–	–	*1*
R5	Slack-shouldered vessel, flared rim	–	2	–	–	–	–	*2*
R6	Upright, slightly pointed rim	–	–	–	–	–	5	*5*
R7	Vessel with rounded internally thickened rim	–	–	–	–	5	–	*5*
R8	Simple rounded rim	–	–	–	1	–	–	*1*
R9	Bead rim vessel	1	3	–	–	–	–	*4*
Total		*3*	*24*	*1*	*6*	*5*	*5*	*44*

(topsoil 20000), while others were rounded (ditch 16807) or pointed (spread 20060). Shoulders were fairly rounded or slack, as with form R5 (Fig. 3.1, 4). One possible lid with a slightly inturned lip (Fig. 3.1, 5) was found within spread 20017. Few base sherds were present, many with just the angle showing. Those that can be identified are all flat, although some had a slightly externally expanded base angle.

Clear coil joins were visible on a group of sandstone and sand-tempered (fabric R4) sherds from spread 20060, and it is likely that most of the other vessels present in this assemblage were made using similar methods. Surface treatment consisted of burnishing and was often present on top of the rim and down to the shoulder on the exterior surfaces; occasionally it continued onto the interior of the rim. No internal burnished surfaces were recorded, suggesting that the majority of vessels were jars as opposed to bowls.

Only three sherds were decorated. One, from layer 16816, in the R1 fabric, had finger-nail impressed decoration on the exterior, but it is uncertain where on the body of the vessel this sherd came from. The other two decorated sherds were both from bead rim vessels (form R9) in the predominant Q1 sandy fabric. A well-burnished fragment from ditch 32709 is possibly a piece of Glastonbury-style ware; the decoration consists of two parallel transverse grooves immediately below the rim, with two diagonal (parallel) grooves below that (Fig. 3.1, 6). A piece from ditch 32723 also had a double transverse groove just below the rim (Fig. 3.1, 7), but is in poor condition. Sooting survives on some sherds, both internally and externally, suggesting cooking or the preparation of foodstuffs or other materials.

Distribution

The pottery came from a number of feature types across the site including ditches, gullies, channel deposits and 'other' deposits (which included topsoil, subsoil and 'hollows'). The majority of the material, however, came from four spreads of occupation material within Area 500. These spreads contained 82% by sherd count (85% by weight) of the total prehistoric ceramic assemblage. The breakdown by individual spread group is presented in Table 3.3.

Table 3.3 Rim sherd examples within spreads, Area 500

Vessel form	*Feature group* 10303/ 20013	20017/ 20031	20060	20152
Total sherd no./wt (g)	*18/ 101*	*25/ 304*	*192/ 1792*	*198/ 2296*
R	–	–	5	1
R1	–	–	4	–
R2	–	1	–	–
R3	–	–	1	–
R4	–	–	1	–
R5	–	–	1	–
R6	–	–	1	–
R7	–	–	–	1
R8	–	–	1	–
Diagnostic total	–	*1*	*14*	*2*

The mean sherd weight (MSW) for material from spreads 20017/20031, 20060 and 20152 did not vary considerably from the overall MSW (10 g), ranging between 9.3 g and 12.2 g. Spread 10303/20013, however, had no recognisable forms and a far lower MSW (5.6 g) suggesting that a far higher degree of fragmentation, either pre- or post-depositionally, had occurred. Spread 20060 contained the broadest range of fabric and form types, with seven out of the 10 fabrics represented within the group. Forms included both finer, thinner walled vessels with burnished exteriors as well as coarser variants some with upright rims. Other recognisable forms included a straight-sided everted rim jar (R3, ON 5, Fig. 3.1, 8) and a slack-shouldered vessel (R5; Fig. 3.1, 4). The everted rim jar had been burnt to the extent that its shape was slightly warped.

Spread 20152 contained a similar sized assemblage by sherd count, although 120 fragments

were from a single rock-tempered (R3) vessel (ON 3, context 20062). It was not possible to reconstruct the profile of this vessel, although the rim was rounded and slightly out-turned (Fig. 3.1, 9) and the base was flat. Only one other rim fragment of uncertain form was found within this spread. As with spread 20060, the body sherds included burnished and well finished thin-walled vessels, including two rejoining sherds from context 20101, part of spread 20152, which were very highly polished and may have been wet-hand finished.

A small group of 25 sherds, all in the limestone-tempered fabric (C1), came from spread 20017/20031. They are from two vessels: three sherds are from a possible lid (form R2), whilst the remaining pieces are plain body fragments, probably from a jar. The absence of the bead rim form (R9) from spreads 20017/20031, 20060 and 20152 suggests these are of Middle Iron Age date as opposed to Middle–Late Iron Age (see below).

Trench 168 (situated to the east of Area 500) was targeted on what was initially thought to be a medieval 'moated' feature, but, the small ceramic assemblage (17 sherds) was all of Middle–Late Iron Age date and comparable, in both fabric and form, to the material from Area 500. A range of fabric types were represented (Q1, Q2 and R1), whilst one diagnostic sherd from an upright, slightly rounded rim (form R1) was recorded. The one example of finger-nail impressed decoration came from layer 16816. Elsewhere on the site, a small amount (32 sherds) of Middle–Late Iron Age material was found within Trenches 324 and 327 in Area E. These include the fragment from a Glastonbury-style vessel (see above) from ditch 32709, and pieces from three further bead rim vessels (form R9) (ditches 32403 and 32723, and topsoil 32700). These are the only examples of the bead rim form from the site (Fig. 3.1, 6, 7, 10).

Discussion

The prehistoric pottery includes rounded, high-shouldered vessels (predominantly jars), plain vessels, thinner walled burnished jars/bowls and a few decorated vessels, including one example of Glastonbury-style ware. Some of the fabrics and rim forms find reasonably close parallels with those from Meare Village West (Orme *et al.* 1981, 51 fig. 38) and Meare Village East (Rouillard 1987). The absence of any sharply angled/carinated forms or haematite-coated vessels, such as furrowed bowls, suggests that the material is probably of Middle Iron Age date, comparable with the assemblage from Dibble's Farm, Christon (Morris 1988). At Steart Point, however, the proportion of decorated vessels is far smaller than at any of the above mentioned sites. The presence of a few bead rim vessels suggests the occupation continued to at least the end of the Middle Iron Age if not into the Late Iron Age. However, the absence of bead rim vessels from the Area 500 assemblage could suggest that activity here ended slightly earlier, perhaps shifting to the area around Trenches 324 and 327 by the 2nd–1st centuries BC. The general paucity of fine sandy fabrics which generally become more prevalent in Somerset during the Late Iron Age may also highlight the predominantly Middle Iron Age date of the Area 500 assemblage.

Other small-scale Iron Age assemblages with which the Steart Point group has compositional parallels are those from Huntworth (Mepham 2008), Whitegate Farm, Bleadon (Woodward 2007), Cannard's Grave (Mepham 2002), Cheddar Reservoir 2 (Wessex Archaeology 2013a) and Cheddar to Brent Knoll Water Pipeline (Brook and Seager Smith forthcoming). Although comparisons are limited by the small size and poor condition of this assemblage, in all main respects it appears to conform to the expected patterns for the area, based on small-scale, localised production and only limited opportunities for trade and exchange.

List of illustrated vessels

(Fig. 3.1)

1. Jar with short, upright rim (R1); fabric Q1. PRN (Pottery Record Number) 16, Area 500, context 20000, ploughsoil
2. Jar with upright rim and sharply angled shoulder (R4); fabric Q1. PRN 25, Area 500, occupation spread 20060
3. Jar with upright, slightly pointed rim (R6); fabric R4. PRN 49, context 20082, Area 500, occupation spread 20060
4. Slack shouldered jar with everted rim (R5); fabric Q1. PRN 23, Area 500, occupation spread 20060
5. Lid/dish (R2); fabric Q1. PRN 19, Area 500, occupation layer 20017
6. Bead rim vessel (R9), Glastonbury ware-style sherd; fabric Q1. PRN 101, Trench 327, context 32708, ditch 32709
7. Bead rim jar, decorated with transverse groove below the rim (R9); fabric Q1. PRN 104, Trench 327, context 32721, ditch 32723
8. Straight-sided jar (R3); fabric R1. PRN 26, Area 500, occupation spread 20060
9. Jar with rounded, internally thickened rim (R7); fabric R3. PRN 66, Area 500, context 20062, occupation spread 20152
10. Bead rim jar (R9); fabric C1. PRN 86, Trench 324, context 32402, ditch 32403

Romano-British Pottery

by Elina Brook and Rachael Seager Smith

The Romano-British pottery assemblage consists of 1831 sherds (42,639 g). The assemblage spans the entire Romano-British period, with an emphasis on the later 3rd–4th centuries AD. The vast majority of this material was retrieved from Area 501 (approximately 80% by sherd count), with smaller quantities of sherds coming from a number of evaluation trenches, notably Trenches 321, 324 and 327.

Methodology

The assemblage was initially recorded to the minimum standards for the archiving of Roman pottery (Darling 1994). Further detailed analysis comprised characterisation of the fabrics (by use of x10 microscope) and forms present, with particular attention being paid to the grey coarsewares. Notes were made on decoration and possible evidence for use and repair, alongside additional information, where applicable (such as the presence of unusual base or handle fragments, the condition of sherds, the presence of stamps and pre- or post-firing perforations). The Oxfordshire wares were recorded using the standard published corpora (Young 1977), as were the South-east Dorset Black Burnished wares (Seager Smith and Davies 1993), and the Exeter type series (Holbrook and Bidwell 1991) was used to record the forms for the South-western greywares A and B. The initial spot dating records were then refined and enhanced where necessary.

Composition of the Assemblage

With an average sherd weight of 23 g, this material appears to be in good condition, although there is some variation between fabrics. Quantification of the fabric types is presented in Table 3.4. Many of the sherds are large and unabraded and although no complete vessels are present, a number of complete profiles could be reconstructed. Rims represent approximately 14% of the total number of sherds but unfortunately most were broken at the neck/shoulder junction, meaning that the full form of the vessel is quite often unidentifiable.

Finewares

Together, the imported finewares represent 1.8% of the total number of sherds (2.9% by weight). Sherds from at least 14 samian vessels derived from the Central and Eastern Gaulish production centres. The absence of Southern Gaulish material is understandable given the general date range of the

Table 3.4 Quantification of Roman fabrics by number and weight

Fabric type	*Number*	*Weight (g)*	*% sherds*	*MSW (g)*
Imported finewares				
Central Gaulish samian	26	580	1.4	22.3
East Gaulish samian	5	226	0.3	45.2
Amphora: Dressel 20	2	423	0.1	211.5
British finewares				
Oxfordshire red colour-coat	27	459	1.5	17
Oxfordshire colour-coat	6	74	0.3	12.3
Misc. colour-coat	1	6	0.1	6
Mortaria				
Oxfordshire red colour-coat mortaria	1	11	0.1	11
Oxfordshire whiteware mortaria	4	273	0.2	68.3
Oxfordshire white-slipped mortaria	11	236	0.6	21.5
South Wales mortaria	3	349	0.2	116.3
Oxidised coarsewares				
Oxidised ware	23	333	1.2	14.5
White-slipped wares	10	40	0.5	4
Grey coarsewares				
SE Dorset BB1	785	9816	42.9	12.5
SW greyware A	583	24,312	31.9	41.7
SW greyware B	218	3823	11.9	17.5
Severn Valley greyware	12	293	0.7	24.4
SEDOWW	2	32	0.1	16
Greywares with black inclusions	42	441	2.3	10.5
Greywares	65	879	3.6	13.5
Sand and calcareous inclusions	5	33	0.3	6.6
Total	*1831*	*42,639*		*23.3*

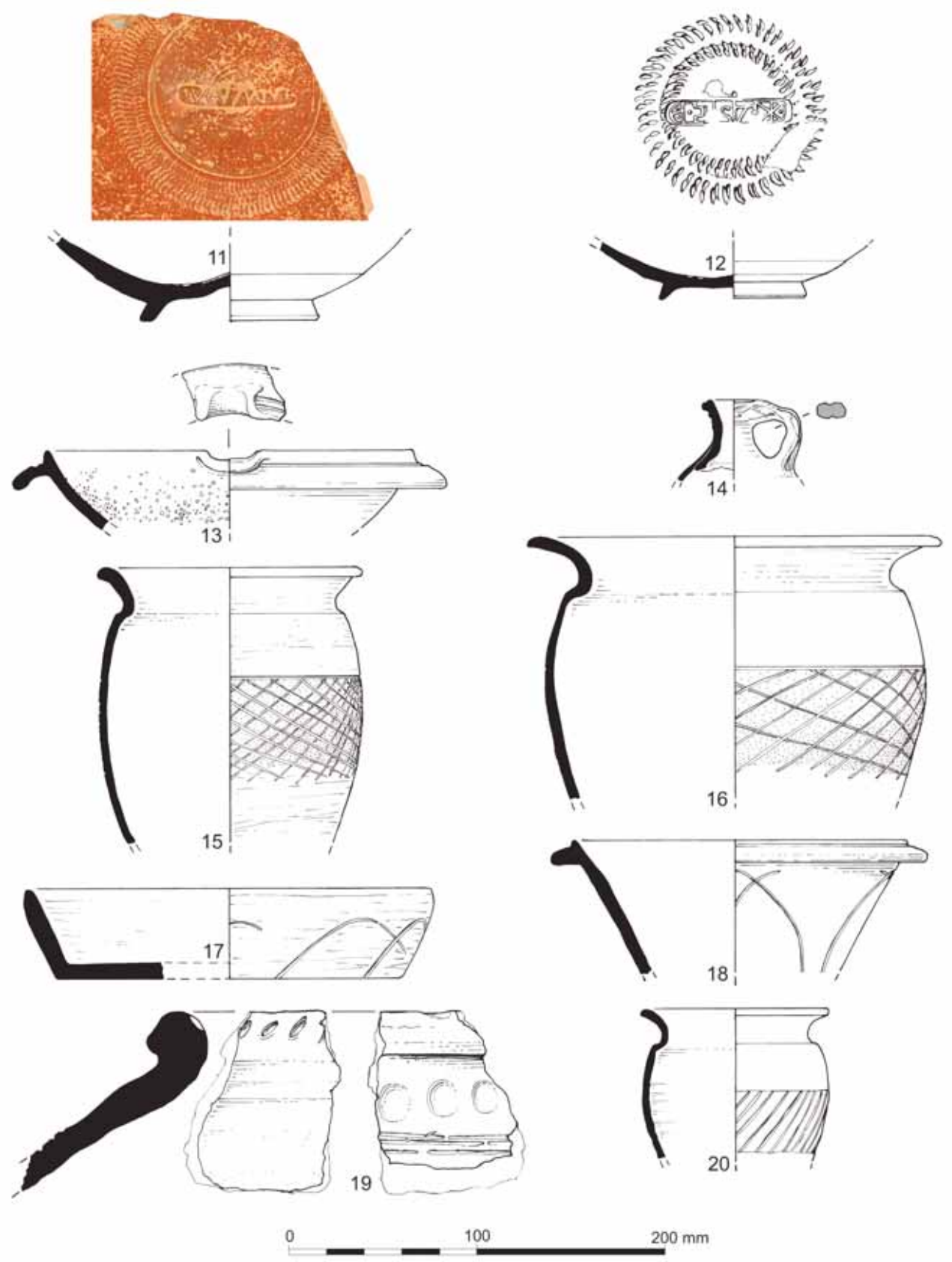

Figure 3.2 Romano-British pottery (nos 11–20)

assemblage, which dates from the mid-2nd century AD onwards. Although the mean sherd weights of the Central and Eastern fabrics (22 g and 45 g respectively) indicate a good condition, many of the sherds are very worn and abraded and some, particularly the East Gaulish pieces, have lost most of their surfaces. It is therefore likely that much of this material is residual within later contexts.

The limited range of samian forms is dominated by the dishes/bowls of the 18/31 series (12 examples), with other forms consisting of one small cup (form 33) and a mortarium (form 45), represented by a single small body sherd, both found within stone spread 20213. All are likely to be of late 2nd–early 3rd-century AD date. A single potter's stamp was recorded on a form 31R bowl found unstratified in Area 501 (Fig. 3.2, 11). The stamp is one of a potter named Iucundus who worked at Rheinzabern, south-west Germany from *c.* 160 AD onwards (Hartley and Dickinson 2009, 316–7). No decorated material was found.

Although a small assemblage, the samian forms present are consistent with those seen elsewhere in the locality, such as at Crandon Bridge (Wild 2008, 104–5). Evidence for drilled repairs was recorded on three form 31 bowls, all in Central Gaulish fabrics (stone spread 20204 (ON 62), ditches 20235 and 20729). The use of metal rivets to repair samian is not unusual (Peña 2007, 246) and they have previously been recorded on material from other sites in the area including Crandon Bridge (Wild 2008) and Brue Bridge (Seager Smith 2003). It does, however, suggest that samian may have been relatively scarce in this area, people perhaps choosing to repair their vessels if replacements could not be easily found.

Amphorae are very poorly represented with only two sherds of Dressel 20 vessels present. This was the most common and widely distributed amphora type in Britain and was imported from Southern Spain where it was made from the Tiberian period (*c.* 14–37 AD) onwards. However, they did not arrive in Britain till the late 1st century AD (Peacock and Williams 1986, 136) and subsequently may have been used as containers throughout the remainder of the Romano-British period. The sherd from stone spread 20213 is a fragment from a handle and, although very abraded, both broken ends appear to have been deliberately worn or rubbed smooth suggesting that it may have been reused, possibly as a pestle.

British finewares similarly account for a very small percentage of the Roman ceramic assemblage (1.9% combined by sherd count). With the exception of one sherd, they are all from the Oxfordshire industries. Amongst the red colour-coat wares, fragments from at least eight bowls were recorded (Young 1977, types C40, C45, C51 and C81). Bead rim (type C45) and flanged (C51) bowls are relatively common and were made throughout the life of the Oxfordshire industries, being exported outside the core area from the latter half of the 3rd century AD onwards. Two bead rim carinated bowl fragments (type C81) from ditch 20283 and hollow 20278 date exclusively to the 4th century AD. Three rejoining base sherds from a stamped and rouletted vessel were found in an unstratified context in Area 501 (Fig. 3.2, 12). Parts of the stamp are very worn and therefore difficult to identify but it is broadly comparable to Young's stamps with elaborate designs (Young 1977, 178, fig. 68.7–12). The five sherds of brown colour-coated ware are very small but are likely to have come from narrow necked vessels such as flagons. A single body sherd with rouletted decoration, possibly from a beaker, of a miscellaneous colour-coated ware recovered during fieldwalking (GPS point 4042) is likely to be from a relatively local source.

Sixteen of the 19 fragments of mortaria were also products of the Oxfordshire region (Young 1977, types C100, M17, M19, WC5 and WC7). They are present in red colour-coated wares, white wares and white-slipped wares, and were produced between *c.* 240–400 AD (Fig. 3.2, 13). The remaining sherds of mortaria are from South Wales and were all found within deposits in Trench 324. Two fragments are rejoining and all are much abraded with no original surfaces surviving; they possibly date to the 2nd–3rd centuries AD (Seager Smith 2000b, 279). Both Oxfordshire and South Wales mortaria have also been found at Cambria Farm, Taunton (Wessex Archaeology 2010b) and at Yeovilton (Seager Smith 2005).

Coarsewares

These wares dominate the Romano-British assemblage (Table 3.4) and include vessels of all types from coarse, food preparation and storage vessels to wares of intermediate quality. A small quantity of extremely worn and abraded oxidised coarsewares (32 sherds, weighing 371 g) falls into the latter category. These include two sherds from a flanged bowl (palaeochannel 20348) which may even be Oxfordshire red colour-coated ware but their condition was so poor they are no longer identifiable as such. A single sherd from ditch 32108 was almost white/buff coloured and very hard fired. One example of a flagon was found within pit 20455 (Fig. 3.2, 14), whilst several other body sherds from closed forms are also likely to be from flagons. Other identifiable forms include a necked jar (ditch 20720) and a lid (stone spread 20213). The very low number of identifiable forms amongst this small group of material makes further dating difficult.

The grey coarsewares comprise 94% of the Romano-British sherds. Eight fabric types were identified (Table 3.4); the forms present in each one are summarized in Table 3.5. This group was

Table 3.5 Quantification of grey coarseware forms by fabric/ware type (no. of rims)

Form	*SE Dorset BB1*	*SW greyware A*	*SW greyware B*	*Severn Valley ware*	*Grey with black inclusions*	*Greywares*	*Sand and calc.*	*Total*
Bowls/dishes	3	3	2	–	–	1	–	*9*
Dog dish	70	1	1	–	–	–	–	*72*
Dropped flange bowl	24	–	–	–	–	–	1	*25*
Everted rim jars	48	17	14	–	2	4	–	*85*
Necked jars	–	7	7	1	1	3	–	*19*
Storage jars	–	27	2	–	–	–	–	*29*
Other jars	–	5	4	1	–	1	–	*11*
Lid	–	1	–	–	–	–	–	*1*
Other	–	2	2	2	1	4	–	*11*
Total	*145*	*63*	*32*	*4*	*4*	*13*	*1*	*262*

dominated by approximately equal quantities (by sherd count) of South-east Dorset (Wareham/Poole Harbour) Black Burnished ware and South-western greywares. The latter were the products of a series of inter-related industries that manufactured coarsewares for local markets in Somerset and east Devon between the 2nd and 4th centuries AD (Holbrook and Bidwell 1991, 19). The vast discrepancy in the weights of these two categories is the result of the large number of storage jar sherds in the more local fabrics. Large storage jars were rarely made by the Wareham/Poole Harbour potters and this would therefore have been an obvious gap in the ceramic market for the local industries to fill.

South-east Dorset Black Burnished ware amounts to 42.9% of all the Romano-British pottery from the site (46% of the grey coarsewares). Vessel forms include everted rim jars (Fig. 3.2, 15 and 16; Seager Smith and Davies 1993, WA types 2, 3 and 2/3) and straight-sided bowls/dishes (Fig. 3.2, 17 and 18; WA types 20, 23–25), all of which were characteristic elements of the Black Burnished ware industry from the mid-2nd century AD onwards. However, the presence of the dropped flange bowls (WA 25) and late surface treatments, such as wiping and a groove defining the zone of decoration, suggest that much of this material dates to the late 3rd–4th centuries AD. This range of forms finds parallels from sites along the Cheddar to Brent Knoll Water Pipeline (Brook and Seager Smith forthcoming, Areas 8 and 9) and many others in the region (Seager Smith 2002; 2003; 2005; Timby 2008).

Two rejoining body sherds of South-east Dorset orange wiped ware (SEDOWW) were found within ditch 20296 (ditch group 20364). These are thought to be amongst the very final products of the Wareham/Poole Harbour region industry and date to *c.* 375–400 AD, possibly even continuing into the 5th century AD (Gerrard 2010). Their distribution is generally restricted to south Dorset and adjacent coastal areas so their presence on the Steart peninsula is unexpected.

The South-western greyware A fabric is characterised by very distinctive soft, flaky, silver or pink, sparkly inclusions (Holbrook and Bidwell 1991, 175, fabric 107) and was probably produced in the area of the Norton Fitzwarren hillfort (Timby 1989, 54, figs. 22 and 23). The South-western greyware B fabric (Seager Smith 1999, 310–11) is defined by rounded quartz and mica, sometimes with additional rock temper. The type A wares account for 32% of all the Romano-British sherds, whilst the South-western greyware B fabric comprises 12% of the total.

Storage jars are predominant (Table 3.5) in these wares. Twenty examples of Exeter type 3 jars (Holbrook and Bidwell 1991, fig. 68) are present and they are exclusively in the greyware A fabric. They are characterised by finger-tip or circular dot impressed decoration on the interior of the rim and thumb-impressed decoration on the shoulder (Fig. 3.2, 19). This style of decoration on the rim of large storage jars is typical of the south-western region generally, appearing in various fabrics (Timby 1989, 54). The single example of an Exeter type 1 jar (from palaeochannel 20721) is in the greyware B fabric. Other forms find parallels with the Exeter gritty greyware types 10, 12 (Holbrook and Bidwell 1991, fig. 66) and 30 (*ibid*., fig. 67), the latter apparently a copy of a Black Burnished ware dish. The similarity in form further reinforces the link between these two fabric groups, as has been noted elsewhere (Seager Smith 1999, 314; 2003; Wessex Archaeology 2010b). Other diagnostic sherds include lid pulls and countersunk handles as well as pieces with burnished line and lattice decoration – all of which are present in both fabrics. Evidence for use was visible on the base of a jar from hollow 20342 where part of the underside was very worn, suggesting the vessel may have been repeatedly tipped towards one side.

A small quantity of fully reduced Severn Valley ware was found in Area 501 and Trench 321. This included fragments from two tankards, a necked jar (Fig. 3.2, 20) and a single jar rim fragment. The tankard, with flared walls, from gully 20729 is similar

to a 4th-century AD form (Webster 1976, fig. 7, 44). The small quantity of Severn Valley ware recorded at Steart Point finds parallels with other sites in the area such as Newbridge, Huntspill (Seager Smith 2003).

The other grey coarsewares included a small quantity of sherds in a fabric containing distinct black inclusions (Table 3.4). Only four rim forms were identified: a jug/flagon from palaeochannel 20721, two everted rim jars (ditches 20362 and 20720) and one necked jar from Trench 317. The date of this material is unclear due to the small size of the assemblage and lack of distinct forms, but 11 of the 15 contexts in which these sherds were found contained material of a predominantly late Roman date. The miscellaneous greywares, representing 3.6% of the Romano-British assemblage, consisted of moderately coarse, sandy fabrics which were difficult to further subdivide. These are probably the products of more than one source, and are likely to be of relatively local origin; pottery production has been postulated, for example, around the Huntspill Cut, alongside salt-making, where petrological analysis has suggested that some of the local greyware may have used sand tempering from the Burtle Beds (Grove and Brunning 1998, 67). Only a small quantity of featured sherds was present. Jars predominate (Table 3.5) – enhanced by the presence of thick-walled storage jar body sherds and a fragment from a large jar base (stone spread 20204). Pieces from a cup/bowl and cup were found within stone spreads 20204 and 20213 respectively and are dated to the 2nd–4th centuries AD. A single fragment from a possible flagon was recovered from palaeochannel 20348.

A single dropped flange bowl, also found within stone spread 20213, was identified amongst the five sherds in a sand and calcareous fabric. This form is late Roman in date but the other sherds were all plain body fragments and so cannot help in dating this group further. Small quantities of calcareous wares have been found along the Cheddar to Brent Knoll Water Pipeline (Brook and Seager Smith forthcoming) and at Yeovilton (Seager Smith 2005), whilst elsewhere in Somerset, such as at Bradley Hill, Catsgore and Shepton Mallet (Leech 1981, 238; Leech 1982, 153; Evans 2001, 141) calcareous wares have been dated to the 4th century AD, although this is based on a very small number of diagnostic sherds.

Distribution

The pottery derived from 131 contexts but only 19 contained groups of more than 25 sherds. The material was recovered from a range of feature types with the limited number of larger groups coming from stone spreads, palaeochannel fills, ditches and gullies in Area 501, as well as pit 20365.

The two spreads (20204 and 20213) both contained a wide range of fabrics but the pieces are all quite broken, worn and abraded. Spread 20204 contained 306 sherds weighing 8919g, with 357 sherds (8983g) retrieved from spread 20213. Together these amount to 36% by sherd count (42% by weight) of the total Romano-British assemblage. Most of the rims were broken at the neck/shoulder junction so that, despite being large sherds, a full identification of form was not possible. The samian found within these deposits is possibly residual, which would imply that some other less diagnostic fragments were too. Alternatively, the whole assemblage represents a gradual accumulation of material, possibly midden-like, spanning the late 2nd–4th centuries AD.

Approximately 60% of the complete profile of an Exeter type 3 storage jar came from pit 20365 and spread 20213 (Fig. 3.3, 21). The base of the vessel (ON 52) was found in spread 20213 which lay directly above the pit, so it appears that the vessel had been deliberately inverted when placed into the feature. Unusually, the base of this vessel had a single, small, elongated slit (approximately 5 mm long and 3 mm wide) made prior to the jar being fired – the purpose of this hole is unclear. However, the practice of pre-firing perforations in the base of large storage jars finds parallels with vessels of South-east Dorset orange wiped ware (Gerrard 2010, 15).

Discussion

The presence of samian and a few recognizable mid-/late 2nd–early 3rd-century AD south-east Dorset Black Burnished ware sherds suggest that activity began here during the middle Romano-British period. Far greater quantities of late 3rd–4th-century AD sherds indicate an expansion in the intensity/extent of occupation in this area during the late Roman-British period, although the more precise dating of individual features is hampered by the relative paucity of large groups of sherds and the nature of the deposits (mostly spreads and layers) from which the largest groups were recovered.

The range of Romano-British fabrics and forms present at Steart Point demonstrate the relatively wide trading links and ceramic influences on this settlement. Apart from a few exceptions (see below) the assemblage is broadly comparable to others in the vicinity such as, to the east, sites along the Huntspill cut (Seager Smith 2003), the Cheddar to Brent Knoll water pipeline (Brook and Seager Smith forthcoming, particularly Areas 8 and 9) and Cheddar Reservoir (Wessex Archaeology 2013a), all on the opposite side of the River Parrett. To the south and south-west, the sites at Cambria Farm, Taunton (Wessex

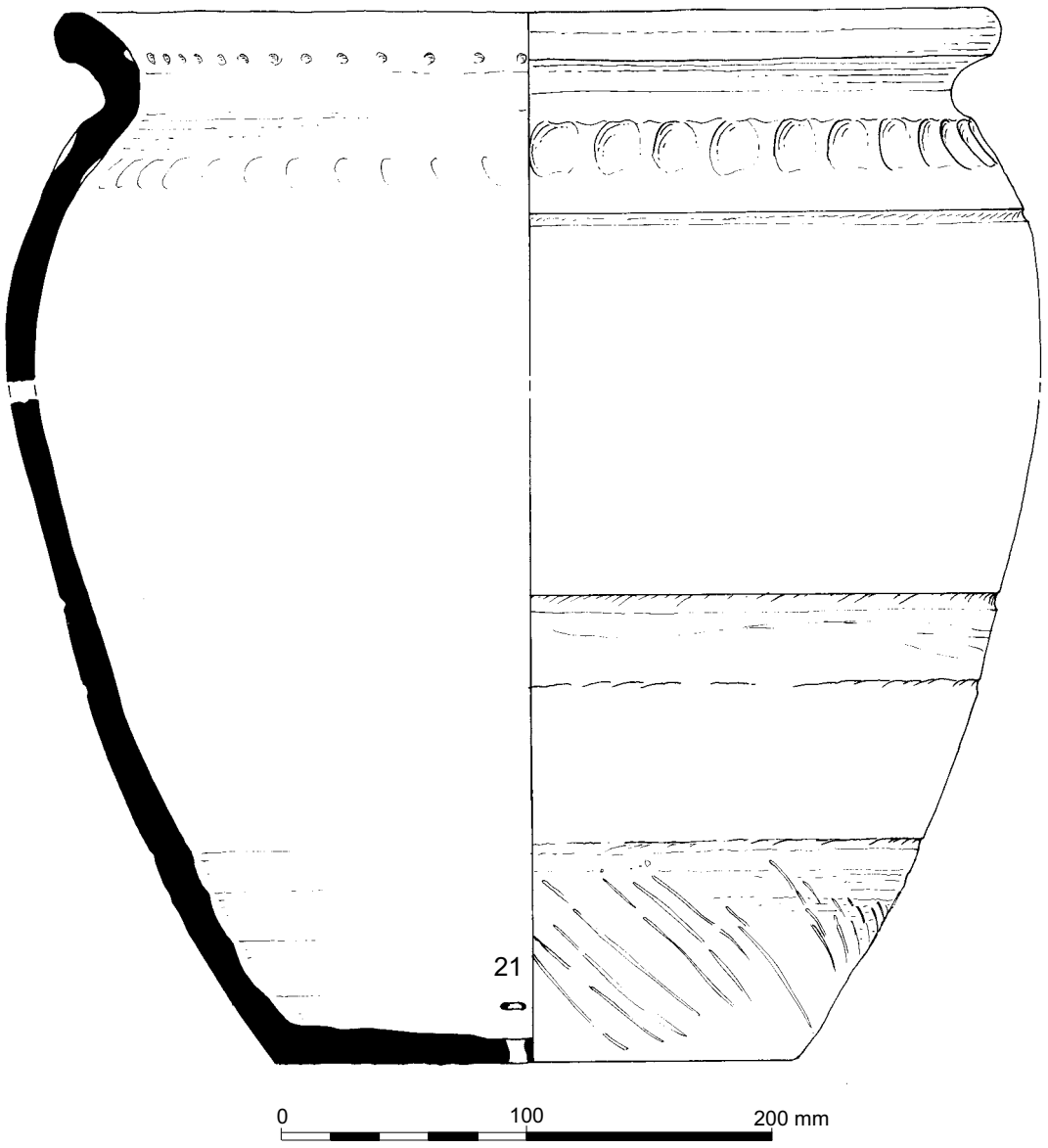

Figure 3.3 Romano-British pottery (no. 21)

Archaeology 2010b) and Norton Fitzwarren (Timby 1989) produced material of a similar nature, whilst further to the south-east the assemblage from Yeovilton (Seager Smith 2005) provides another parallel. There is a limited, although standardised, range of imported/traded wares including samian (Central and Eastern Gaulish) and Dressel 20 amphorae, along with mortaria from Oxfordshire and South Wales as well as finewares from the Oxfordshire region. The low proportion of oxidised wares is typical of the pattern recognised elsewhere in Somerset (Evans 2001, 159).

All of these sites display a similar reliance on local coarsewares, together with South-east Dorset Black Burnished ware, the commonest regional import in the area. Totalling 43% of the Roman pottery assemblage (by sherd count), this fabric is far more frequent than at Cambria Farm, Cheddar to Brent Knoll and Crandon Bridge (21%, 26% and 17% respectively) (Timby 2008), for example, and is more akin to quantities from Ilchester (between 50–60%), Yeovilton (55%), Bleak Bridge (65%) and the Huntspill salterns (42%) (Seager Smith 2002; 2003). These sites all lie within the Polden Ridge corridor distribution zone identified by Allen and Fulford (1996, 243), and it is likely that the Steart Point assemblage can now be included in this group.

The reason for the variability in the proportion of South-east Dorset Black Burnished ware in assemblages from sites in Somerset remains unclear. Ilchester may have acted as a distribution centre for these wares (Seager Smith 2005, 35) while the wider settlement at Crandon Bridge, located 8 km to the south-east, may have had a role as a trans-shipment

port during the Roman-British period for goods, perhaps including South-east Dorset Black Burnished ware, brought through Somerset and then exported in the first instance to South Wales and onwards up the western coasts of Britain (Rippon 2008, 134). Occupation continued at Crandon Bridge up to the 370s AD, contemporary with the activity and settlement at Steart Point. The small community at Steart Point may therefore have been able to acquire various goods from traders as they made their way into the Outer Severn Estuary. Other strong trading links to the south and west are further emphasised by the high proportions of South-western greywares A and B (44% combined) which were made at centres in east Devon and Somerset. The absence of South-west Dorset Black Burnished ware is not unexpected, however, as it is related to chronology. The production of these wares is thought to have ended by the middle of the 3rd century AD (Holbrook and Bidwell 1991, 93–4) prior to the main period of activity at Steart Point.

The range of forms includes utilitarian wares through to fine tablewares, but vessels associated with food preparation and storage are predominant. These include jars in a wide range of sizes, dishes and bowls/dishes whilst there are only minimal numbers of tablewares such as cups, beakers and flagons. The presence, however, even if in small quantities, of the oxidised wares, Oxfordshire finewares, mortaria and the few imports distinguish this as a 'domestic' assemblage, in comparison to some of the very utilitarian coarseware assemblages recovered from the saltern sites in the area (Seager Smith 2000a; 2002; 2003), and is typical of small rural farming communities seen across southern Britain, who enjoyed at least some access to locally and regionally imported goods.

List of illustrated vessels

(Figs 3.2–3)

11. Bowl (Dr 31R); East Gaulish samian. Unstratified
12. Base from stamped vessel; Oxfordshire red colour-coated ware. Unstratified
13. Mortarium (Young 1977, type WC 5); Oxfordshire white-slipped ware. Area 501, rejoining sherds from contexts 20402 and 20403, alluvial layer
14. Flagon; oxidised ware. Area 501, context 20456, pit 20455
15. Everted rim jar (WA 2) with lattice decoration; South-east Dorset Black Burnished ware. Area 501, ON 56, context 20434, gully 20432
16. Everted rim jar (WA 3) with lattice decoration; South-east Dorset Black Burnished ware. Area 501, ON 45, context 20276, ditch 20726
17. Straight-sided dish (WA 20) with burnished arc decoration; South-east Dorset Black Burnished ware. Area 501, context 20220, ditch 20362
18. Flanged bowl (WA 25) with burnished arc decoration; South-east Dorset Black Burnished ware. Area 501, context 20223, stone spread 20213
19. Storage jar; South-western greyware A. Trench 321, topsoil
20. Necked jar; Severn Valley greyware. Area 501, context 20240, ditch 20262
21. Storage jar with pre-firing slit in base; South-western greyware A. Area 501, ON 52, contexts 20294 and 20366, stone spread 20213 and pit 20365

Medieval and Post-Medieval Pottery

by Lorraine Mepham

The medieval and post-medieval assemblage amounts to 2089 sherds (42,718 g), deriving almost entirely from Areas 502 and 503, with scattered sherds from the evaluation trenches (particularly Trenches 160 and 165). The assemblage covers a chronological sequence from the 11th/12th century through to the 17th century. Later sherds, which represent incidental finds deriving entirely from topsoil and subsoil deposits in evaluation trenches, have been excluded from this analysis

Methodology

Methods of analysis have followed the standard Wessex Archaeology recording system for pottery (Morris 1994), which accords with national guidelines for post-Roman pottery (Medieval Pottery Research Group (MPRG) 2001). Analysis has focused on the definition of fabric and vessel form (the latter following nationally recommended nomenclature: MPRG 1998), with other attributes recorded including surface treatment, decoration, and evidence for use and re-use (residues, perforations, etc). Fabric analysis has been supplemented by petrographic analysis of samples of five fabrics (Q401, R400, R403, R404 and R405) by Dr Imogen Wood. Her report is reproduced in full in Appendix 2, and the results are incorporated in the fabric descriptions and discussion below.

Table 3.6 gives a quantified breakdown of the assemblage by fabric type, while the fabric types themselves are described in Appendix 1.

Medieval

For the medieval assemblage (1113 sherds; 17,782 g), analysis has resulted in the definition of 20 fabric types, which fall into several groups based upon known or potential source/source area. As might be

Table 3.6 Quantification of medieval and post-medieval pottery fabrics

Fabric Code		*No. sherds*	*Weight (g)*
E481A	Ham Green A	11	398
E481B	Ham Green B	15	155
E484	Redcliffe ware	20	329
E485	Medieval Donyatt ware	6	38
E520	Saintonge ware	9	43
L400	Limestone-tempered coarseware	10	95
Q400	Greensand-derived coarseware	1	24
Q401	Hard, fine sandy ware, firing buff to pale pink	76	1726
Q402	Hard, fine sandy fabric, pale-firing	4	73
Q403	Hard, moderately fine sandy fabric	108	1842
Q404	Sandy ware with iron-stained quartz	2	16
Q405	Pale-firing sandy ware	1	5
Q407	Hard sandy fabric, much coarse mica	1	3
Q408	Hard, fine sandy fabric; iron-stained quartz; some glazed	2	9
R400	Coarseware, sparse coarse rock	48	740
R401	Coarseware; sparse rock	93	1101
R402	Coarseware; sandy matrix with sandstone	151	2441
R403	Coarseware; moderate sandstone	230	4809
R404	Coarseware; sandy matrix with sandstone	20	239
R405	Coarseware; finer variant of R402	305	3696
	sub-total medieval	*1113*	*17,782*
E600	Post-medieval redwares	850	22,344
E601	Hard, fine sandy fabric; black grains	94	1952
E602	Hard, fine sandy fabric; some fine calcareous inclusions	6	71
E603	Hard, fine sandy fabric; micaceous; prominent iron oxides	11	444
E530	Iberian coarseware	1	6
E531	Merida-type ware	12	97
E787	Frechen stoneware	2	22
	sub-total post-medieval	*976*	*24,936*
	Total	*2089*	*42,718*

expected, the largest group comprises wares likely to have been made within the local area (say, within a 30 kilometre radius of the site), with other groups representing a range of more regional sources. There are also a small number of sherds of imported continental wares.

The condition of the medieval assemblage is fair to good; mean sherd weight is 16 g, and in general levels of surface and edge abrasion are low, suggesting a relatively low incidence of reworking and redeposition.

Sandstone-rich coarsewares (fabrics R400–R405)
This group of fabrics, which are clearly closely related, dominates the medieval assemblage (64% by sherd weight). Their predominance suggests a relatively local source(s). Fabrics characterised by the presence of sandstone (R400–R405) are now increasingly recognised across west Somerset as forming a coarseware tradition. They are recorded, for example, at Cheddar (Rahtz 1979, fabrics H, M), Shapwick (Gutierrez 2007, fabrics U3 and U6) and Brent Knoll (Gutierrez 2008, fabrics 2–4). A potential source in the Cheddar or Axbridge area (ie, Mendips) was postulated for the Shapwick fabrics (Gutierrez 2007, 605), while petrological analysis of samples from Brent Knoll suggested a source amongst the Devonian sandstones and siltstones of the Quantocks area (Taylor 2008). Further parallels for the Steart coarsewares have recently been excavated from a site at Weston-super-Mare (G. Langman pers. comm.).

The results of thin section analysis of samples of fabrics R400, R403, R404 and R405 suggest that there is some variability in the sourcing of clays and the production techniques employed. The majority of the fabrics are derived from Sandstone-rich derived clay with a varying range of minerals, with the exception of R400. The lack of limestone and chert inclusions rules out the Mendips side of the immediate area for this fabric group, and it is reasonable to assume that these sandstone clay fabrics derived from a suite of rocks and minerals consistent with the Quantock Hills area, most likely the alluvium in river valleys leading off this geology. This is consistent with fabric 2 identified by Taylor (2008) from medieval pottery found at Brent Knoll Village. However, the presence of limonite in all the samples would suggest a more waterlogged clay source, perhaps closer to Steart Point. The composition of minerals in R403 and the lack of mudstone would indicate a source located on the Quantocks and one that did not receive much processing in production.

The fabrics of R405 and R404 contain larger, more angular Red Sandstone fragments in the fabric, and it is possible that these were added as tempering

Table 3.7 Medieval and post-medieval vessel forms by pottery ware group

	Medieval					*Post-medieval*		
Form	*Sandstone-rich*	*Sandy coarse*	*Regional glazed*	*Imports*	*Misc. fabrics*	*Redwares*	*Imports*	*Total*
Jars	88	16	–	–	3	4	–	*111*
Bowls/dishes	9	16	1	–	–	119	–	*145*
Jugs/pitchers								
Rims	1	–	3	–	–	8	–	*12*
Handles	2	2	–	1	–	11	1	*17*
Chafing dish	–	–	–	–	–	1	–	*1*
Cistern	–	–	–	–	–	2	–	*2*
?Costrel	–	–	–	–	–	–	2	*2*
?Curfew	1	–	–	–	–	–	–	*1*
Total	*101*	*34*	*4*	*1*	*3*	*145*	*3*	*291*

material. The wider range of minerals and higher degree of rounding seen in R400 is the exception in the group. The fabric strongly suggests a sand temper derived from the lower reaches of the River Parrett or estuarine sands along the Steart and Berrow flats. It is directly comparable with a sample from a medieval assemblage at Brent Knoll (Wood forthcoming, fabric R400).

Jars are predominant amongst the vessel forms seen here (Table 3.7), all with undeveloped rims (Fig. 3.4, 1–4); there are three bowls/dishes (Fig. 3.4, 5–7), and one jug (strap) handle. A second strap handle with a pre-firing perforation could belong to a curfew rather than a jug. Apart from the jug handle, which is slashed, there is a complete absence of decoration.

The dating of these coarsewares is not absolutely clear, and is hampered by the lack of a clearly established chronological sequence for the region, which appears to have been aceramic between the late 7th and mid-10th centuries. Elsewhere sandstone-rich wares are dated as late 10th to 12th century (eg, Gutierrez 2007, 605; 2008, 115; J. Allan pers. comm.), and may extend into the 13th century.

Upper Greensand-derived ware (fabric Q400)

One fabric, represented by a single body sherd, falls within this ware tradition, characterised in this instance by the presence of polished quartz grains. This tradition is now well known in Somerset and the surrounding region, and petrological work has indicated a source (or rather, a series of sources) in the Blackdown Hills south of Taunton (Allan 2003). Examples of Upper Greensand-derived wares (sometimes described as 'chert-tempered') have been identified locally at Shapwick (Gutierrez 2007, fabrics U1, AA3), Taunton (Pearson 1984, pottery type 55) and Brent Knoll (Gutierrez 2008, fabric 5), and more distantly at Exeter (Allan 1984, fabric 20) and Ilchester (Pearson 1982, fabric group B), and the date range extends from the late 10th to the 14th centuries.

Later medieval sandy wares (fabrics Q401–Q403)

A group of three sandy fabrics may be related; they are visually similar in texture, and appear to represent a later medieval ceramic development, superseding the sandstone-rich coarsewares, but containing a similar suite of inclusions. They make up 18% of the medieval assemblage by weight.

Thin-section analysis was carried out on a sample of one of the fabrics in this group (Q401: see Appendix 2). This fabric contained, alongside abundant quartz and rare to sparse sandstone, common inclusions of iron-rich clay pellets (not grog), which would suggest this was a waterlogged clay, containing degraded Red Sandstone and angular quartz. There is little apparent degree of processing in production, suggesting little or no temper was needed. A source area similar to the sandstone-rich fabrics is likely.

While jars are still prevalent amongst this group, they are more likely to have developed rims, and there is an almost equal proportion of other vessel forms (Table 3.7), mostly bowls/dishes, many with flanged rims (Fig. 3.4, 9, 10), with two jug handles. The only decoration is a single finger-impressed rim.

A broad date range of 13th to 15th centuries is suggested for this group. There is almost certainly an overlap with the group of 'North Devon medieval coarsewares', as identified, for example, at Cleeve Abbey, where they appear in the 14th century (Allan 1999, 58), and in north Devon *c.* 1200 (Allan 1994, 142–4). Comparable wares have been found at Bridgwater, and are now considered to have a source somewhere in the Quantocks or Exmoor (J. Allan pers. comm.); fabric Y at Shapwick may also be comparable (Gutierrez 2007). It may be noted that there are documentary references to medieval pottery manufacture in the 13th and 14th centuries at Bridgwater, about 7 km to the south of the site, and at Nether Stowey, about 10 km to the south-west (Le Patourel 1968, 125).

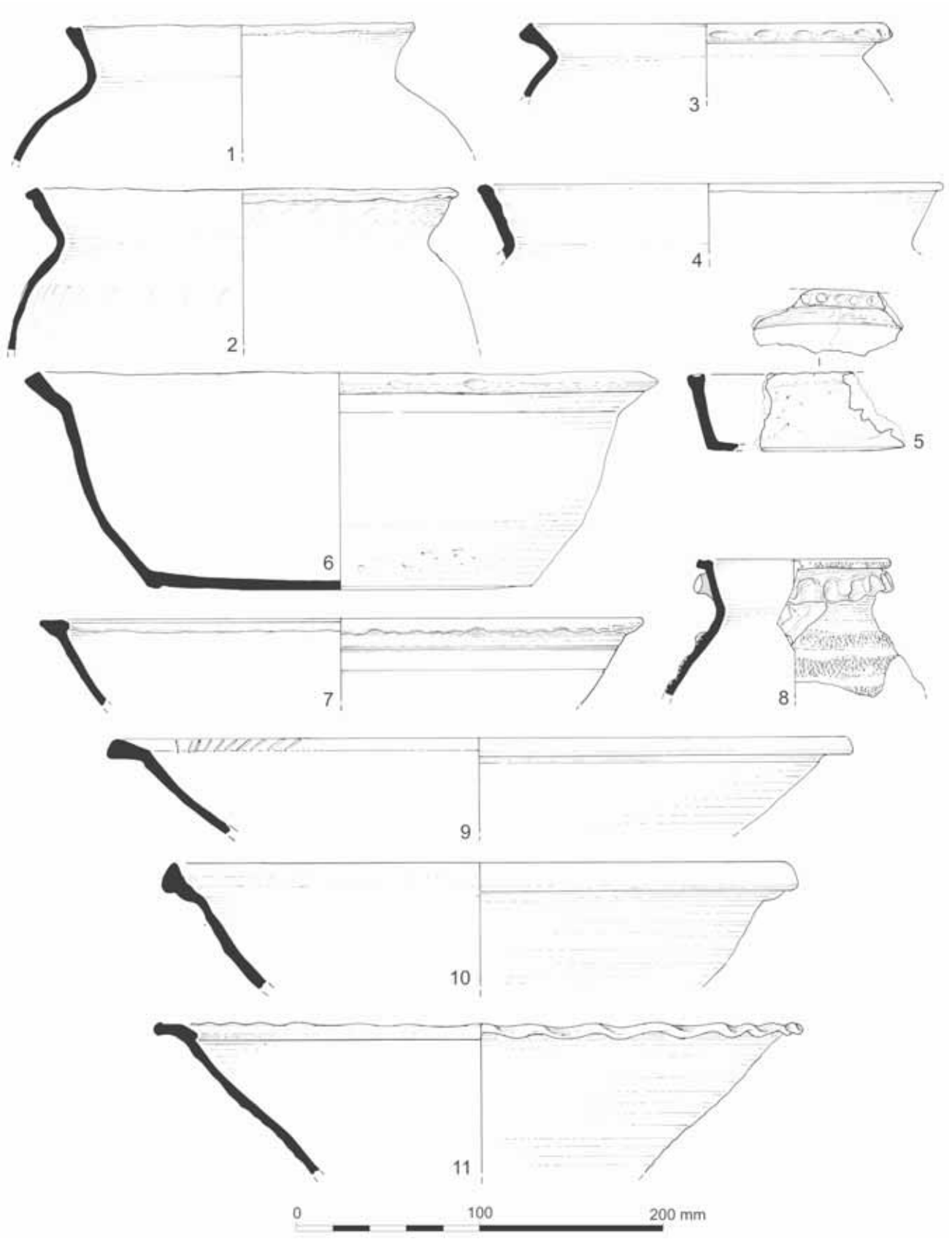

Figure 3.4 Medieval and post-medieval pottery (nos 1–11)

Bristol wares (Ham Green, Redcliffe)
Three ware types from the Bristol area were identified. Two are comparable to products of the Ham Green production centre to the south-west of the city (Barton 1963; BPTs (Bristol Pottery Type) 26, 27). The third is Redcliffe ware (BPT118), dated *c.* 1250–1500 in Bristol. Nearly all sherds in all three wares are glazed, and vessel forms identified are almost exclusively jugs, with one bowl in Redcliffe ware. Few sherds are decorated: two in Ham Green ware are combed, and two rouletted. One sherd in Redcliffe ware carries applied and slipped decoration, and a second has two-directional combing or scoring. One sherd in Ham Green 'A' ware, however, is clearly part of an elaborately decorated vessel – this is the rim of a jug from ditch 21166, with a thumbed applied strip round the neck, bands of diamond rouletting below, and the edge of an applied motif, possibly in some kind of anthropomorphic design (Fig. 3.4, 8). This appears to fall within a 'transitional' group showing traits of both 'A' and 'B' jugs according to Barton's original definition. The applied thumbed strip is characteristic of 'A' jugs, but the small diamond rouletting and applied decoration on the body are more typical of 'B' jugs; a similar example was found in a transitional group at the Ham Green kiln site, which Ponsford dates from 1175, although their full currency is not yet established (Ponsford 1991, 94, 98, fig. 4, 3).

Miscellaneous wares (L400, Q404, Q405, Q407, Q408)
Five fabrics, four sandy and one limestone-tempered, have not been assigned to any of the groups otherwise defined, and could include both locally-produced and regionally-traded wares. The sandy fabrics are represented by only one or two sherds, and the limestone-tempered fabric by eight sherds. The only diagnostic sherds are three jar rims in L400, and a body sherd in fabric Q408, glazed over a manganese-rich slip. The sherd in Q407 is visibly micaceous, and distinct from the imported micaceous redwares of the post-medieval period (see below). This sherd has a presumed source in the south-west, and may belong to the group of 'South-western micaceous wares'.

Imports
Nine sherds in fine whitewares have been identified as imports, probably from the Saintonge. There is only one diagnostic sherd, a strap handle from topsoil in Area 503, and only one sherd is glazed. Saintonge wares were imported from the mid–late 13th century into the early 14th century, and are known largely from the major ports such as Southampton, Exeter and Bristol. Outside these ports their presence is sometimes associated with 'higher status' occupation, for example on manorial or religious sites (although they were absent from Cleeve Abbey, also in a coastal location 20 km to the west; Allan 1999, 49), but this interpretation is difficult to sustain here, given the scarcity of other fine glazed wares, and they are more likely to have resulted from coastal trade, probably via the port of Bridgwater.

Post-Medieval

Redwares
The post-medieval assemblage (976 sherds; 24,936 g) consists almost entirely of redwares, both glazed and unglazed. The difficulties of subdividing this group of wares in any sensible way, and of trying to identify potential sources, have been well rehearsed (eg, Allan 1999, 46; Allan 2000; Gutierrez 2007, 664). The likelihood is that the overwhelming majority of these wares are derived from various sources in south Somerset. Wasters and/or kiln debris have been found, for example, at Crowcombe (Allan 1999, 47), Nether Stowey (*ibid.*, 47; *VCH* 1985) and Wrangway (Dawson *et al.* 2003, 49), as well as at the better known production centre at Donyatt (Coleman-Smith and Pearson 1988). Apart from Donyatt, however, the full history and range of products from these sites is as yet unknown, and there are undoubtedly further kilns still awaiting discovery, all exploiting very similar raw materials. It is also possible that some north Devon wares are present.

Some variations in colouring and texture were noted amongst the redwares from Steart, and three variants appear distinct from the majority (E601–E603). All contain quartz grains and other sparse inclusions (black grains, possibly iron ore, and/or white inclusions, probably limestone) visible under x10 magnification. The majority of the redwares, however, occurred in a non-distinctive fabric, generally firing orange-brick red, and containing fine quartz (E600). A small proportion of redware sherds are white-slipped under the glaze, and a very few of these also carry sgraffito decoration (Fig. 3.5, 14).

Vessel forms are predominantly bowls (Table 3.7), and these mostly conform to a single profile – flared bowls with flanged rims. There are minor variations on this; in some cases, the flange is wide and the rim profile relatively flat, while in others the flange is narrow and the rim internally expanded to form a 'collar'. Some have pulled lips. Other bowls/dishes are in simple flared forms; one example has a finger-impressed 'pie crust' rim (Fig. 3.4, 11), for which parallels are known amongst the wasters from Crowcombe (D. Dawson pers. comm.). There are a small number of jugs, with rounded profiles and rod handles. Jars are scarce, but there is one almost complete profile from ditch 21489, glazed internally and with glaze splashes externally, with a very

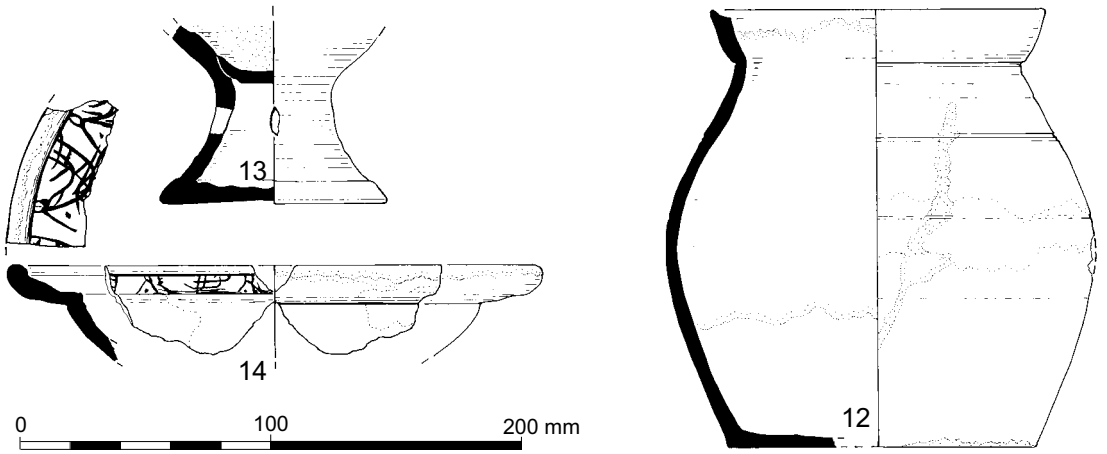

Figure 3.5 Post-medieval pottery (nos 12–14)

obviously worn band around the girth, presumably resulting from some particular (although unknown) use or reuse (Fig. 3.5, 12). No similar wear patterns were observed on any other vessels. The jar itself finds a parallel in a large pit group from Trichay Street, Exeter, with a closing date of *c.* 1660 but with some wares, including these coarsewares, dating from the late 15th or 16th century (Allan 1984, 180, fig. 95, no. 2159).

The bowls/dishes could have fulfilled a number of different functions. These open forms, particularly the flared profiles, are often interpreted as having some function in dairying, for example as cream settling pans. The pulled lips would certainly fit with this interpretation, but it is unlikely to be the only use to which these vessels were put. Sooting on the exterior surfaces of other vessels indicates their use for cooking. Overall, both Areas 502 and 503 show a limited, albeit possibly multi-purpose repertoire of vessel forms; the only other vessel forms identified comprise a chafing dish base (Fig. 3.5, 13), and a bunghole spout from a cistern. The absence of specialised cooking vessels such as pipkins, which are well represented in the Donyatt kiln assemblages, and are found at Shapwick from the 17th century (Gutierrez 2007, 666), could be explained by an alternative use of metal vessels at this period, particularly in a region where the manufacture of cast bronze vessels was well-established.

Other wares

Other post-medieval wares are extremely scarce, and consist exclusively of continental imports. These include two sherds of German (probably Frechen) stoneware (both from topsoil layers in Area 503); a small body sherd in a pink-buff micaceous fabric, possibly an Iberian olive jar (ditch 21489); and a small number of sherds in micaceous redwares, falling within the group usually termed 'Merida-type ware', although it is now recognised that this group can also encompass coarsewares made elsewhere on the Iberian peninsula (Gerrard *et al.* 1995, 288). Diagnostic sherds here include a narrow-mouthed rim, and part of a strap handle, both probably from costrels. The ware was imported from the 13th century onwards, but a wide range of forms became common in the 16th and 17th centuries, and it is likely that the Steart examples, and also the olive jar, belong to this date range. The only stratified sherd came from enclosure ditch 21048; the others were from topsoil and cleaning layers in Areas 502 and 503. There are numerous finds of Merida-type ware in south Wales and the Bristol area (*ibid.*, fig. 20.5c).

There are no other British wares. As this scarcity is unlikely to be because of lack of access to regionally traded wares, given the presence of other non-local items amongst the post-medieval material assemblage (see below, *Glass*), a chronological explanation seems likely. The German stonewares probably date to the 17th century, and the slipwares and sgraffito wares have a potential date range of 17th to 18th century, but the complete absence of common wares from the mid–late 17th and early 18th centuries, such as the Staffordshire-/Bristol-type marbled slipwares and mottled wares, and English stonewares from the Staffordshire and Nottinghamshire/Derbyshire production centres, and any later wares, suggests an end date for the assemblage sometime in the early to mid-17th century.

Pottery Distribution

Area 502

This area produced 165 sherds in total, of which only 67 derived from stratified features: 24 sherds from

enclosure ditch 20568, 21 sherds from moat ditch 20566 and 22 sherds from drainage ditch 20567. Seventy-two sherds were recovered from an alluvial layer overlying cobbled surface 20504, and a further 25 came from topsoil, subsoil and cleaning layers.

Of the features which contained pottery, ditch 20567 appears to be the earliest (jars in local coarseware fabrics 1, 3, 5 and 10, and a glazed pitcher in Ham Green A; 11th to 12th century). Enclosure ditch 20568 contained local coarsewares (mostly from outer ditch 20564) and two sherds of Redcliffe ware (late 13th-century or later), while the small group from enclosure ditch 20566 included later medieval sandy wares and three sherds of post-medieval redware, one with finger-dragged sgraffito decoration. The sherds overlying the cobbled surface 20543 are of similar late medieval/early post-medieval date, and include flared bowls and jugs. The only sherd here (including those from topsoil and subsoil layers) that can be definitively dated later than the 16th century is the sgraffito-decorated sherd from enclosure ditch 20566 – finger-dragged sgraffito appeared by the second quarter of the 17th century (Coleman-Smith and Pearson 1988, 85, fig. 36) – but other plain redwares could by association be of similar date.

Area 503

The majority of the medieval and post-medieval pottery recovered from the site came from Area 503 (1751 sherds; 37,024 g). Out of this total, 1101 sherds (23,394 g) came from stratified feature fills, largely drainage and enclosure ditches.

In the first phase enclosure (A), ditches 21166 and 21413 produced 68 sherds, mostly of local coarsewares, with one sherd from a 'transitional' Ham Green A decorated jug, dating from *c.* 1175 (Fig. 3.4, 8), suggesting that the enclosure may have been established by the 11th century (and possibly earlier), but certainly by the 12th century. Field system ditches 21046 (18 sherds) and 21487 (44 sherds) appear to have been broadly contemporary, as do ditches 21213 (18 sherds), 21411 (1 sherd), 21192 (7 sherds), 21482 (50 sherds), 21486 (6 sherds), 21491 (1 sherd), 21493 (23 sherds) and 21497 (20 sherds), some within the Enclosure A and some outside. Ditch 21412 contained 47 sherds of 11th-/12th-century pottery; one sherd of post-medieval redware could be intrusive. There is little here that could be definitively dated later than 12th century, though there are a few sherds of finer sandy wares from ditches 21213 and 21487, and a sherd of glazed Redcliffe ware from a discrete feature (21174) outside Enclosure A. A radiocarbon date of cal AD 1010–1160 (SUERC-42513, 956±30 BP) for gully 21322 (three sherds), and one of cal AD 1020–1220 (SUERC-42512, 911±30 BP) for ditch 21166 (65 sherds), both obtained from charred wheat grains, tend to confirm a focus on the 11th to 12th centuries.

Pottery from the second phase enclosure (B) comprises 25 sherds from ditch 21047, including late medieval and early post-medieval wares (14th–16th-century). The quantities of pottery in this enclosure ditch are far lower than in Enclosure A, and there is little within the enclosure that could be said to be contemporaneous – pit 21298 (12 sherds) contained one sherd of early post-medieval redware. The assemblage from ditch 21483 (36 sherds), the recut of ditch 21499, is similar in character to ditch 21047.

It seems that the focus of activity in the early post-medieval period was instead to the north-east, in Enclosure C, the south-western side of which recut the Enclosure B ditch 21047. Ninety-six sherds were recovered from enclosure ditch 21048, but the largest group in this area came from ditch 21489 (236 sherds). The assemblages from these two ditches are dominated by redwares, including manganese-glazed vessels and slipwares, and a large group of flanged bowls. Other groups from features within the enclosure are much smaller, and tend to be a little more mixed chronologically. The manganese-glazed wares and slipwares, and the absence of any later finewares (eg, Staffordshire/Bristol-type marbled slipwares or mottled wares) suggest that Area 503 was abandoned by the mid-/late 17th century; one sherd of imported Frechen stoneware from the topsoil supports this date range.

Trenches across 'moated' sites

Trenches targeted on the known 'moated' sites (Trenches 160, 164–169) all identified archaeological features or deposits presumed to be of medieval date, although in only one trench were the features directly dated by pottery.

In Trench 160, a ditch coincident with earthwork enclosure SHER 2034 (16005) contained no pottery, but 13 medieval sherds were recovered from the topsoil. These were chronologically mixed, including local coarsewares of 11th- to 12th-century date as well as later medieval sandy wares (13th–15th-century).

Three intercutting ditches were located in Trench 165, targeted on earthwork enclosure SHER 2036. Sherd numbers were small from all three – two sherds from ditch 16519, four from ditch 16531, and 24 from ditch 16523. Sherds from 16519 and 16531 were restricted to early medieval local coarsewares, while the slightly larger group from 16523 included Redcliffe ware and 14th–16th-century Donyatt ware. Topsoil and cleaning layers yielded a further 45 sherds, including late medieval sandy wares and early post-medieval redwares.

Discussion

Chronology

The full range of medieval sandstone-rich coarsewares and finer sandy wares occurs on both Areas 502 and 503. There are, however, differences in the proportions of these groups on the two sites, which may have chronological implications, although the relative small size of the assemblage from Area 502 precludes the drawing of any firm conclusions on this basis. The finer sandy wares form a higher proportion of the medieval assemblage than the sandstone-rich coarsewares in Area 502, while the opposite is true of Area 503, suggesting that for the latter site there may have been a heavier emphasis on the 11th/12th century, while in Area 502 the focus may have been slightly later, from the 13th century into the 14th century and possibly beyond. Area 502 has very little post-medieval pottery, suggesting that this site may have been abandoned by the end of the 15th century at the latest; however, the excavated area just clipped the edge of the 'moated' enclosures, and the focus of activity is likely to have been to the south-west. Area 503 has a small but significant late medieval component, and may have continued in use without any hiatus of occupation into the post-medieval period. None of the 'moated' sites produced pottery definitively later than the mid-17th century, and the evidence suggests that all were abandoned at about the same time, coinciding with a period of severe storms and flooding events (see Chapter 5).

The assemblages: repertoire and function

Medieval and post-medieval assemblages are both extremely limited in terms of vessel forms (Table 3.7). Jars are overwhelmingly predominant in the medieval period, with a small proportion of bowls and dishes, and very few jugs. There is a definite focus on utilitarian kitchen wares at the expense of tablewares; the jars, of course, could have been multi-purpose within the domestic sphere, used for food storage, preparation and serving. In this respect the assemblage contrasts starkly with that from the village of Shapwick, which produced a range of glazed wares, deriving from sites covering a wide socio-economic range (Gutierrez 2007, 659–60).

Bowls and dishes become more common in the later medieval period, equalling the proportion of jars, but jugs are still scarce. In the post-medieval period, bowls predominate, and specifically flared forms with flanged rims, some with pulled lips. These forms are often linked to dairying functions (for example, as cream settling pans), and this would certainly correspond to the importance of dairying in the region at this time (see Chapter 5), but it may not have been their sole function. The presence of sooting on some of the bowls indicates their use for cooking, and their use as salting pans has been suggested (D. Dawson pers. comm.).

Sources of supply

As might be expected, in all periods the most common wares are those that are considered to be of relatively local manufacture. These include the medieval sandstone-rich and sandy wares, with suggested source areas in and around the Quantocks, and the post-medieval redwares, probably largely from various Somerset sources. This is not unusual – excavations across Somerset show that pottery sources are consistently local throughout the medieval period (Gutierrez 2007, 660). The assemblage from Steart suggests that pottery production on a household scale was thriving along the River Parrett zone in this period.

Given the largely utilitarian nature of both medieval and post-medieval assemblages, the presence of glazed finewares from more distant sources stands out – these include jugs from the Bristol area, as well as continental imports. Their occurrence here need not imply any 'high status' association (as is more likely to be the case for inland sites such as the Cheddar Palaces and Glastonbury Abbey), but merely a tapping into the coastal trade around the south-western peninsula, possibly accessed via the market at Bridgwater. The same applies to the Iberian coarsewares (olive jar and Merida-type ware) in the post-medieval period.

List of illustrated vessels

(Figs 3.4–5)

1. Jar rim, undeveloped; fabric R402. Pottery Record Number (PRN) 217, Area 503, context 21014, ditch 21482
2. Jar rim, undeveloped; fabric R402. PRN 360, Area 503, context 21133, ditch 21166
3. Jar rim, undeveloped; finger-impressed rim; fabric R405. PRN 391, Area 503, context 21171, ditch 21402
4. Jar rim, undeveloped; fabric R403. PRN 554, Area 503, context 21370, ditch 21497
5. Dish profile; finger-impressed rim; fabric R405. PRN 163, Area 503, context 20535, enclosure ditch 20568
6. Bowl profile; fabric R403. PRN 655, ONs 225 and 235, Area 503, context 21445, ditch 21446
7. Bowl profile; fabric R403. PRN 606, Area 503, context 21419, subsoil
8. Decorated jug, Ham Green 'A' ware; applied thumbed strip around rim; rouletted bands below neck; applied decoration; glazed. PRN 354, Area 503, context 21129, ditch 21166
9. Flanged bowl; shallow tooled lines running obliquely across rim; fabric Q401. PRN 188, Area 503, context 20579, enclosure ditch 20566

10. Flanged bowl; fabric Q403. PRN 168, Area 503, context 20552, ditch 20569
11. Bowl with 'pie-crust' rim; redware. PRN 551, Area 503, context 21272, ditch 21489
12. Convex jar profile, glazed internally, worn band around girth; redware. PRN 538, ON 222, Area 503, context 21272, ditch 21489
13. Chafing dish pedestal base; fabric E601. PRN 191, ON 206, Area 503, context 21001, topsoil
14. West Country style sgraffito flanged dish; fabric E601. PRN 746, Area 503, context 21296, topsoil

Other Finds

by Lorraine Mepham, with a contribution by Nicholas Cooke

Other finds were recovered in relatively small quantities; Table 3.8 gives the breakdown by material type.

Table 3.8 Quantification of other finds

Material	*Number*	*Weight (g)*
Ceramic Building Material	58	2699
Fired Clay	591	7555
Stone	105	39,826
Flint	4	199
Glass	9	167
Metalwork (total)	102	–
Coins	7	–
Copper alloy	5	–
Lead/Lead alloy	6	–
Iron	84	–
Shale	1	–
Leather	1	–
Worked Bone	3	–
Shell	51	574

Ceramic Building Material

A large proportion of the ceramic building material recovered came from the evaluation trenches; this was nearly all of post-medieval/modern date (roof tile, brick and drainpipe fragments), and was discarded after quantification.

The only pieces of earlier date comprise three fragments of medieval roof tile (ploughsoil in Trench 142; topsoil in Trench 321; stone spread 20213 in Area 502).

A small group of fragments from Area 503 derive from one or more late medieval or early post-medieval floor tiles (topsoil, subsoil, ditch 21048, ditch 21489). The tile(s) is undecorated, but has streaks of glaze over the upper and lower surfaces; the upper surface has been partially burnt.

Fired Clay

The fired clay comprises small fragments, largely undiagnostic, but with some retaining surfaces. Fabrics are largely fine-grained, and with a soapy texture, although a smaller proportion contain what may be organic material which has resulted in a more open texture; fragments in these coarser fabrics are often grass-marked on surfaces. Two fragments from layer 32104 (Trench 321) contain crushed fossil shell, but this is the only occurrence of these inclusions.

Fragments from two contexts in Area 501 have been identified as deriving from flattish 'plates'. The larger of these, from Romano-British gully 20729, has a smooth upper surface, a rougher underside with grass-marks, and preserves part of a straightish edge. Three joining fragments from gully 20732 are thinner and no edge survives, but these are assumed to derive from a similar object. Similar objects have been interpreted as 'oven plates'; they are sometimes circular or ovoid, but a group recently recovered from a Romano-British site at Durrington, Wiltshire, and apparently associated with pottery manufacture, are leaf-shaped, with straightish sides and pointed ends (Seager Smith forthcoming).

The remainder of the fired clay is less easily ascribed to specific function, but it is likely that most if not all is structural in origin, and could derive from hearth or pit linings, or upstanding structures, although only one piece has a surviving wattle impression. It was observed, however, that a small proportion of fragments (all from Area 501) have the distinctive purplish-pink colouring often associated with salt-working ceramics, or briquetage (Morris 2001, 41). One of these fragments has a possible cut edge, but no other diagnostic pieces were identified. The occurrence of briquetage here is not unexpected; the existence of a salt extraction industry in Somerset during the Romano-British period is well established, although not yet well researched, and a number of salt-making sites have been identified, for example, in the Huntspill Cut, and close to the present coastline, around Highbridge and Huntspill Island. Salt-making sites appear largely to have been located south of the course of the former River Siger, in an area which remained subject to tidal influence while the area to the north of the river was reclaimed for agriculture and settlement (Grove and Brunning 1998).

Stone

Portable objects

The single quern recovered (ON 21, from cleaning over Romano-British stone spread 20404 in Area 501)

is a saddle quern in a gritty conglomeratic sandstone of Devonian origin, with a possible source either in the Forest of Dean or possibly in the local Hangman Grits of the West Quantoxhead/Hodder's Combe Beds (K. Hayward pers. comm.).

One certain whetstone was identified; this is a long, thin, cigar-shaped object with a subrectangular cross-section. In addition, a further 26 rounded and elongated pebbles were collected, mainly from Area 501, as it was thought that some at least might have been utilised. Closer examination suggests that only one shows definite signs of utilisation (surface polish on one face). Rounded pebbles or cobbles would have been easily available on the nearby shoreline, and a number were employed in cobbled surfaces.

A large sub-spherical object (ON 29, from Romano-British stone spread 20213 in Area 501; see Pl. 2.8) with a partial perforation could have been used as a weight (6 kg); this is in a red sandstone of Triassic origin (Mesozoic source) from the Bristol area.

Building material

The building material comprises fragments of roofing slabs in limestone (Blue Lias) and sandstone (Devonian). Larger blocks of limestone (Blue Lias and White Lias) and paper shale (from the local Middle and Upper Lias) were probably also used as building materials, although showing no obvious signs of working. Most of this building material came from the Romano-British site at Area 501, with one limestone tile from Area 502. Other building material in the form of roofing slates came from Area 503, nearly all from post-medieval contexts. Although spreads of stone rubble were encountered in Areas 502 and 503, the only i*n situ* masonry uncovered was the well-built post-medieval latrine (21165) in Area 503. The walls of this structure were mainly of limestone, but incorporated other stone types as well (Pl. 2.17).

Spreads of stone cobbling were encountered in Areas 501, 502 and 503. A small selective sample of some of these cobbles was retained for stone identification. Most appeared to be of sandstone from a Devonian source, such as the Hangman Grit outcrop, 10 km to the south of the peninsula (K. Hayward, pers. comm.). Longshore drift along the coast would have brought a plentiful supply of suitable rounded beach pebbles to the peninsula.

Struck Flint and Stone

Only five pieces were recovered. Two are flint flakes. Both (from Trench 31) are very fresh and are more probably accidental removals by agricultural machinery than artefactual. Nevertheless, since flint does not occur naturally in the area they may derive from introduced nodules.

A piece from late medieval ditch 21047 in Area 503 is a patinated and rolled fragment with flake scars on both surfaces. The original form is impossible to reconstruct, since later crude retouch has removed an unknown portion of the object, resulting in a squat piece with a short blunt protrusion. In its present form, the piece may be late prehistoric (Iron Age), but it is far from diagnostic.

The remaining two pieces are cores. One (also from ditch 21047) is a multi-platform irregular core on a very cherty nodule, soon abandoned and used as a hammer. It is most likely to be of later Neolithic or Early Bronze Age date, although the unforgiving nature of the raw material means that it could be earlier. The other (from the surface of Romano-British ditch 20007 in Area 500) is a fragment of Blue Lias, apparently a detached core face. The flaking is somewhat crude, but appears genuine. There are no particular indications of date, although the size of the visible flake and blade removals suggest later (Neolithic or Bronze Age) rather than earlier prehistoric.

Glass

This material type includes vessel and window glass, and objects. The vessel and window glass is all post-medieval and mostly modern (19th/20th century), the exception being a fragment from a green wine bottle of later 17th- or 18th-century date (layer 21421 in Area 503).

Of greater interest, however, are three glass beads (Fig. 3.6, 6–8; Pl. 3.1), all from Area 503 but found in separate contexts (ditch 21048, ditch 21470, topsoil). All three are of the same type: drawn, cylindrical beads in opaque blue, with marvered canes of opaque red and white creating three stripes running down each bead; one of the beads is slightly twisted, giving a spiral effect. Beads of this type are amongst a wide variety of glass beads manufactured in the workshops of Venice in the 16th and 17th centuries; the manufacture of glass beads was a virtual Venetian monopoly in the 16th century, and in the 17th century shared apparently only with Amsterdam (Charleston 1986). The occurrence of these exotic beads at Steart, in such an apparently small, isolated settlement, seems unusual, but the inhabitants would presumably have had access to imported goods entering through north Devon/Bristol Channel ports and redistributed along the coast. Overseas trade in a variety of goods passed through Bridgwater, and both Steart and Stolford provided landing places.

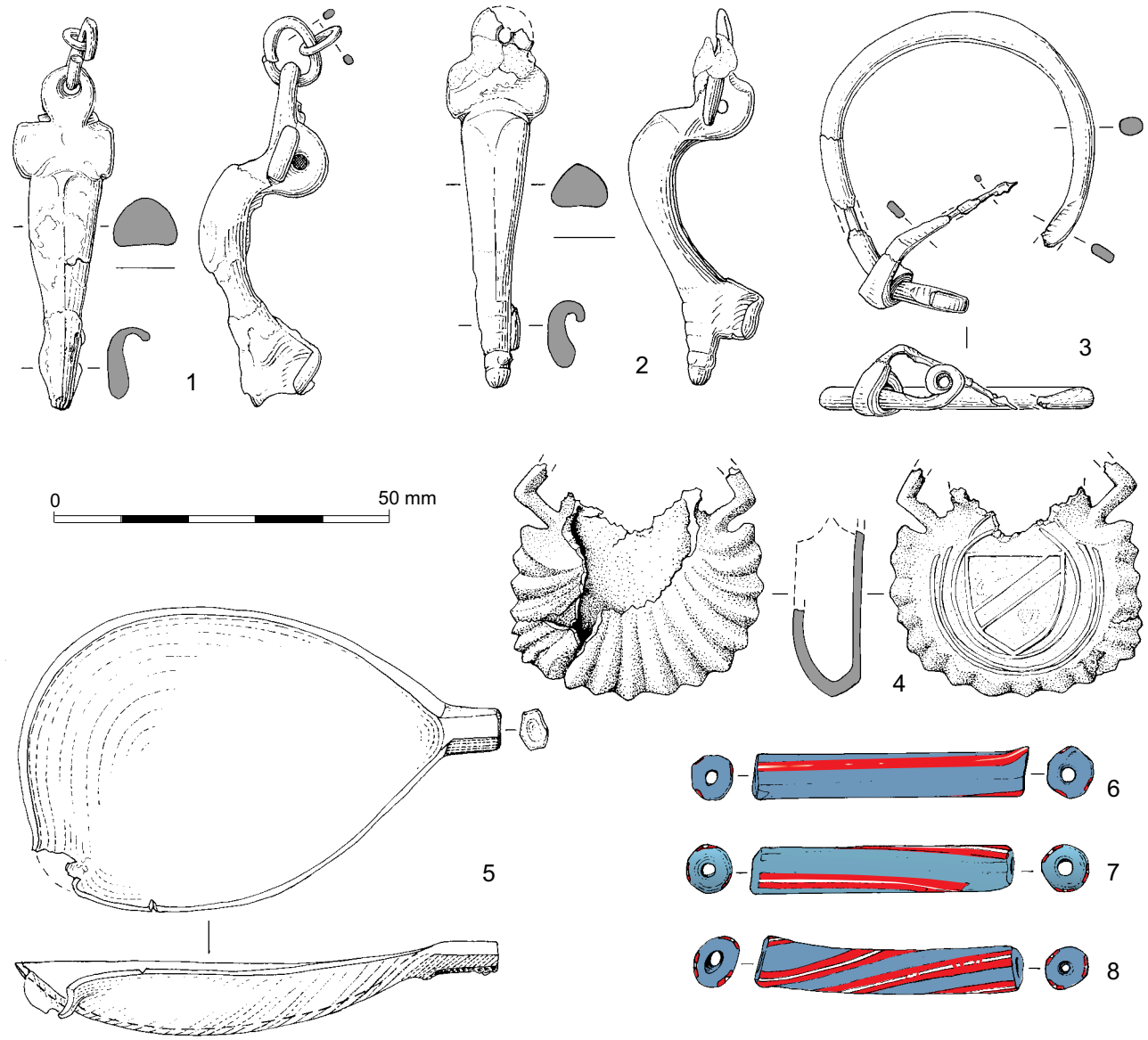

Figure 3.6 Metalwork (nos 1–5); glass beads (nos 6–8)

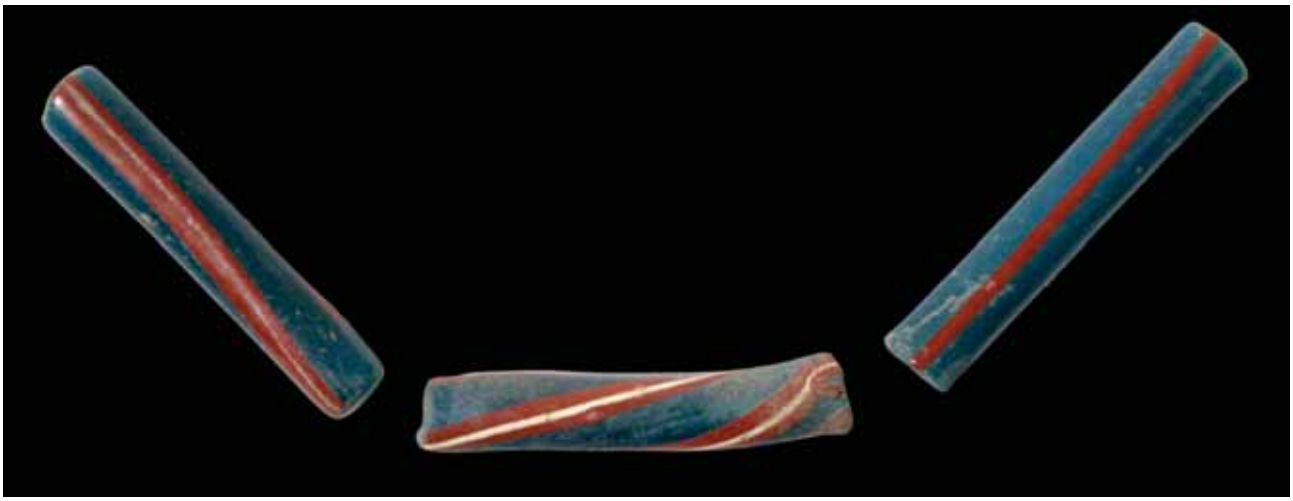

Plate 3.1 Venetian glass beads

Imported pottery of similar date has been found on Area 503 (see above), and a Venetian glass bead has recently been identified at Barnstaple, on the north coast of Devon (Mepham forthcoming).

One other bead (ON 35, not illustrated) was recovered – a small, globular bead in semi-opaque blue glass of Romano-British type; this was a surface find in Area 501.

List of illustrated objects

(Fig. 3.6)

6. Venetian polychrome glass bead, drawn cylinder. ON 208, Area 503, context 21097, ditch 21048
7. Venetian polychrome glass bead, drawn cylinder. ON 228, Area 503, context 21427, ditch 21470
8. Venetian polychrome glass bead, drawn cylinder. ON 234, Area 503, topsoil layer 21296

Coins

by Nicholas Cooke

Seven coins were recovered – six from Area 501 and one from Area 503. The six coins from Area 501 are all copper alloy coins of the Romano-British period, whilst the single coin from Area 503 is a medieval hammered silver coin. In general, the coins are in poor condition, with many displaying signs of post-depositional corrosion; the hammered silver coin is particularly brittle.

Roman coins

The six coins from Area 501 span the Romano-British period. The earliest (found unstratified) is a very worn and corroded *sestertius* dating to the 1st or 2nd century AD. The remaining coins all date to the late 3rd and 4th centuries AD. One of these (from ditch 20730) was too badly worn and corroded to be assigned anything other than a general 3rd- to 4th-century date. Three date to the late 3rd century: an *antoninianus* (from ditch 20201) of Victorinus (AD 268–70); a radiate copy of an *antoninianus* (unstratified) of Tetricus II (AD 270–3) struck between *c.* AD 270 and AD 296; and an *antoninianus* (unstratified) of Allectus (AD 293–6). These radiate copies were copies of 'official' coinage, possibly struck to compensate for gaps in supply of coinage to Britain and to supply sufficient small change for the provinces needs. It is unclear whether these copies were officially sanctioned, if at all, but they are not uncommon as site finds, and seem to have circulated in the same fashion as officially struck coins. The latest Roman coin from the site is a *centenionalis* (unstratified) of Magnentius (AD 350–3). There is little that such a small assemblage can tell us about activity on the site other than the fact that the area was clearly in use during the late 3rd and 4th centuries AD. With no official mechanism for withdrawing them from circulation, the large bronzes of the 1st and 2nd centuries AD are relatively common finds in later contexts and assemblages.

Plate 3.2 Lead ampulla or pilgrim's souvenir

Medieval coin

The single coin from Area 503 is a hammered silver *hardi d'argent* (from construction cut 21087 for latrine 21165) minted by Henry IV, Henry V or Henry VI (*c.* 1399–1453). This is one of a series of Anglo-Gallic coins issued by the English kings in France for use in their territories in France. These are rare finds in England (R. Kelleher, pers. comm.) and it is not clear how the coin ended up on the site, although given that a pilgrim's ampulla was recovered from the same context, it is possible that it was brought back from abroad by someone perhaps returning from one of the major pilgrim sites in France or Spain.

Metalwork

Copper alloy

Apart from coins, only five other copper alloy objects were recovered. Three are Romano-British brooches, all from Area 501. Two of these were from the same context (stone spread 20213), and clearly formed a pair, although not absolutely identical (Fig. 3.6, 1–2). These are knee brooches, which can be dated to the later 2nd or early 3rd century AD (Bayley and Butcher 2004, 179–81). The third brooch (Fig. 3.6, 3) came from ditch 20362, and is of simple annular form, which spans the Romano-British period.

The fourth object was from Area 503 (ditch 21048), and is a small, double-looped buckle of late medieval or post-medieval type; the type is particularly common in 16th- and 17th-century contexts, when they were probably mass produced

(Whitehead 1996, 52–3). Finally, a small tack came from post-medieval ditch 21048 in Area 503.

Lead/lead alloy

Of interest amongst the lead and lead alloy are two objects – a lead ampulla (Fig. 3.6, 4; Pl. 3.2) and a pewter spoon (Fig. 3.6, 5). The ampulla, or miniature phial, is a type of pilgrim souvenir; they were designed to hold the holy water dispensed to pilgrims at many shrines and holy wells. This example is of scallop shell form, with a flattened back; the top is missing, but the bases of two opposed loop handles survive; the ampulla could have been suspended by these handles so that it could be conveniently worn, for example on a cord around the neck. The type can be identified as a Type II scallop, which resembles the true scallop, with bold, radiating ribs and a notched edge (Spencer 1990, 59, fig. 170). Ampullae have a currency from the late 12th century to the early 16th century, and a wide distribution across England; the more robust examples from the 14th and 15th centuries are often found on the sites of medieval hamlets and farmsteads, as appears to be the case at Steart. A number of scallop-shell ampullae have been found at Salisbury, Wiltshire. The type is difficult to date individually, but the Salisbury examples are presumed to be late medieval, *c.* 1350–*c.* 1530 (*ibid.*, 58). The Steart ampulla was found in the construction cut for latrine 21165 in Area 503; the same context produced a silver coin dated *c.* 1399–1453 (see Cooke, above) although, of course, either object could have been curated for some time before its eventual deposition in this feature.

The spoon, from ditch 21489, is also incomplete; it comprises a fig-shaped bowl (one side of which is damaged) and the base of the stele (shaft). Without the top of the stele, which could have provided more diagnostic features, the spoon is difficult to date, but the fact that the bowl is relatively shallow, and there is very little discernible reinforcement of the stele on the underside of the bowl, suggests that this item dates after *c.* 1570, but probably no later than the mid-17th century (Moore 1999, 128).

Other lead objects consist of small pieces of waste; one piece from Romano-British ditch 20201 in Area 501 could have functioned as a vessel repair patch.

Iron

The iron objects are all heavily corroded, which has hampered identification, despite X-radiography. A high proportion consists of probable nails (from all areas), and there are also a few hobnails (Trenches 321, 327; Area 501); the latter are likely to be Romano-British (see also Leather, below).

Two ox shoes are also present (one from Trench 165, one from ditch 21048 in Area 503), as well as two knives (both from ditch 21482 in Area 503), and a small annular buckle (cleaning layer in Area 503). All these objects are of medieval or post-medieval date.

List of illustrated objects

(Fig. 3.6)

1. Roman knee brooch. ON 12, Area 501, stone spread 20213
2. Roman knee brooch. ON 13, Area 501, stone spread 20213
3. Roman annular brooch. ON 26, Area 501, ditch 20362
4. Lead pilgrim's ampulla. ON 238, Area 503, context 21088, construction cut 21087 for latrine 21165
5. Lead alloy spoon bowl; slight damage to edge. ON 220, Area 503, ditch 21489

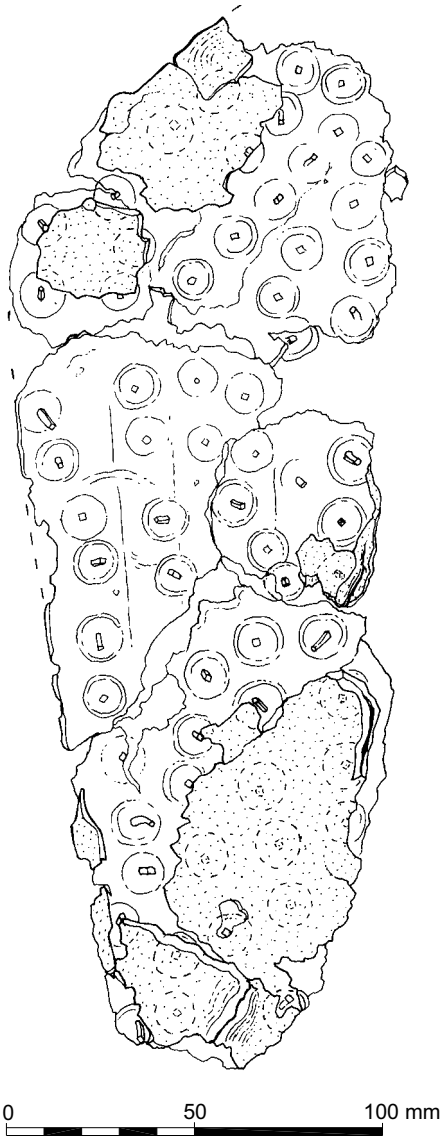

Figure 3.7 Hobnailed leather boot sole

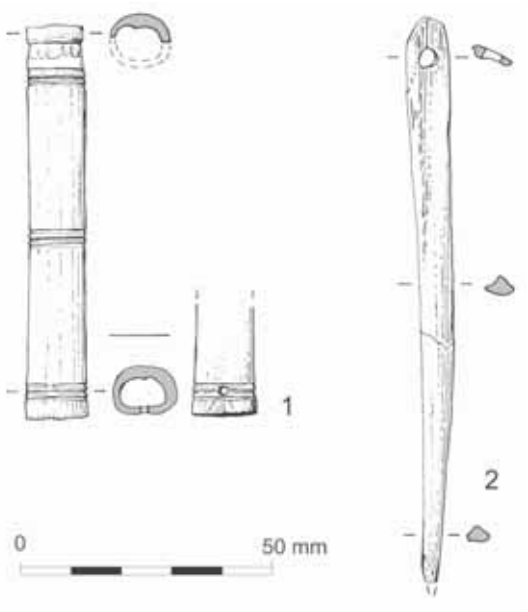

Figure 3.8 Worked bone (nos 1–2)

Shale

A single object of shale was recovered (ON 31); this is a fragment from a plain, lathe-turned armlet of Romano-British date. It came from ditch 20362 in Area 501.

Leather

A leather hobnailed shoe (ON 27) was recovered in a waterlogged condition from Romano-British ditch 20362 in Area 501 (see Pl. 2.6). The leather has almost completely degraded, and the only recognisable component is the hobnailed sole (Fig. 3.7). The hobnails appear to be of uniform size, and run around the outline of the sole, with at least two, and possibly three slightly irregular parallel lines running down the sole. A very similar arrangement was seen in one of two boots or shoes found in a late Romano-British grave at Lankhills, Winchester (Clarke 1979, fig. 39), although hobnailed footwear has been found in graves and other deposits dating from all periods of the Roman occupation of Britain. Clarke lists four types of leather footwear from Romano-British sites, of which three (the *calceus*, a studded shoe; the *solea*, the Roman sandal; and the *caliga*, the military boot) were hobnailed. This example could belong to any of these three types.

Worked Bone

Three objects of worked bone were recovered. These comprise a handle (ON 217), a broken point or awl (ON 246) and a needle (ON 226), all from Area 503.

The broken point is made from the proximal end of a tibia shaft, and was presumably utilised as an awl; both tip and head are missing, but part of a transverse perforation across the head survives, and the object has been polished through use. This object came from a medieval ditch.

The handle (Fig. 3.8, 1) came from an undated ditch, but is of medieval/early post-medieval type. It is made from a sheep metatarsal shaft, has a surface polish, and is decorated with three transverse bands, each of three close-spaced, lathe-turned, incised lines. There is a small rivet hole at one end.

The needle (Fig. 3.8, 2) was found in two joining fragments, and is missing the tip. It is made from a pig fibula; the head is flat and has a single eye 3 mm in diameter. This object came from a post-medieval context.

List of illustrated objects

(Fig. 3.8)

1. Handle; decoration in form of three narrow bands of transverse incised lines. ON 217, Area 503, context 21128, ditch 21167
2. Needle in two joining fragments; perforated head. ON 226, Area 503, context 21421, cleaning over cobbled surface 21422

Marine Shell

The marine shell includes limpet, oyster, scallop and whelk, all occurring in very small quantities across Areas 501, 502 and 503. The exploitation of shellfish is not unexpected given the site's location. The oyster includes both right and left valves, ie, both preparation and consumption waste. One of the oyster shells has a small, sub-rectangular perforation, possibly deliberate, near the edge. Perforated oyster shells have been recorded on various sites of Romano-British and medieval date (eg, Winder 1999; Wyles and Winder 2000), although their significance (deliberate perforation for a specific function, or accidental damage during reworking of refuse deposits) is still a matter of debate. This example came from a late Romano-British ditch (20362) in Area 501.

Human Bone

by Kirsten Egging Dinwiddy

Human remains from three contexts were analysed, comprising a probable inhumation burial and a very small quantity of redeposited bone, all from Area 501 and of probable Romano-British date.

Table 3.9 Summary of the results of the human bone analysis

Context	*Deposit type*	*Quantification*	*Age/sex*
20214, part of stone spread 20213	R.	1 bone l.	neonate *c.* 40 wk
20266, part of stone spread 20263	R.	3 frags s.	adult > 25 yr
20295, part of stone spread 20213	?inh. burial	*c.* 18% u.l.	neonate *c.* 40 wk

R. – redeposited; s., u., l. – skull, upper limb, lower limb

Methodology

The degree of bone erosion was recorded using McKinley 2004 (figs 1–7). Age was assessed considering skeletal development, neonatal long bone lengths, and age-related changes (Scheuer and Black 2000; Buikstra and Ubelaker 1994). Non-metric traits were noted in accordance with Berry and Berry (1967) and Finnegan (1978).

Results and Discussion

A summary of the results is presented in Table 3.9. Full details are held in the archive.

The probably *in situ* burial remains comprise *c.* 18% of a neonate, recovered from a shallow depression in the vicinity of stone spread 20213 (Fig. 2.8). Another neonate bone, also from 20213, definitely represents a second individual, although of very similar age. Three adult skull fragments came from stone spread 20263 (Fig. 2.4).

Bone preservation is fair (grades 2–4, mostly 3) with the inhumation burial remains being least degraded. Overall fragmentation was moderate, the breakage occurring once the bone was in a dry state. The poor skeletal recovery of the burial remains is probably due to disturbance in antiquity, though perhaps a lack of recognition in the field of a neonate was also a factor. The adult skull fragments have a slight surface sheen – something that has in other cases been interpreted as a result of repeated handling, though certain burial environments can produce a similar effect.

The nature of the assemblage precluded the calculation of any indices; no morphological variations or pathological lesions were observed.

It is well recognised that the very youngest members of Romano-British communities were regularly excluded from formal cemeteries, being more frequently interred in domestic settings and structures (Philpott 1991, 97–102; Mays 1993; Struck 1993; Scott 1999; McKinley 2011), and this is likely to be the case with the neonate remains here. The occurrence of the odd piece of redeposited bone in Romano-British contexts is also not unusual, and the three adult skull fragments fall into this category. Interpretations for such finds range from the more typical accidental disturbance of nearby burials to the deliberate curation and/or manipulation of skeletal remains (eg, Egging Dinwiddy 2011, 114; Egging Dinwiddy and McKinley 2014, 152–3).

Animal Bone

by Lorrain Higbee

The assemblage comprises 2657 fragments (or 35.09 kg) of animal bone. This is a raw count and once conjoins are taken into account this falls to 2035 fragments. The bulk of this material was recovered during the normal course of hand excavation, and the rest was retrieved from the sieved residues from a number of bulk soil samples.

Animal bone was recovered from all four of the open area excavations (Table 3.10), with the largest stratified groups coming from Areas 501 and 503, and small amounts from Areas 500 and 502, as well as the evaluation and watching brief stages of fieldwork.

Methodology

A detailed method statement is provided in the site archive. In summary, the following information was recorded for each identified fragment: element, anatomical zone (after Serjeantson 1996, 195–200; Cohen and Serjeantson 1996, 110–12), anatomical position, epiphyseal fusion data (after O'Connor 1989), tooth ageing data (after Grant 1982; Halstead

Table 3.10 Quantity and provenance of animal bone

Area	*Date range*	*Total weight (kg)*
500	Middle/Late Iron Age	0.48
501	Late Romano-British	10.55
502	Medieval	3.85
503	Medieval – post-medieval	15.97
Evaluation and watching brief	Iron Age – post-medieval	4.24
Total		*35.09*

Table 3.11 Animal bone: number of identified specimens present (or NISP)

Species	*Iron Age*	*Romano-British*	*Medieval*	*Post-medieval*	*Undated*	*Total*
cattle	10	86	113	42	18	269
sheep/goat	23	209	178	102	12	524
sheep	–	2	5	–	–	7
pig	2	12	17	22	5	58
horse	2	43	11	5	3	64
cat	–	–	–	1	–	1
dog	–	3	5	2	–	10
roe deer	–	–	–	1	–	1
fallow deer	–	–	–	–	1	1
stoat	–	–	3	–	–	3
domestic fowl	–	–	4	3	–	7
goose	–	–	1	–	–	1
duck	–	–	1	–	–	1
crow	–	–	8	–	–	8
ling	–	–	1	–	1	2
roker	–	–	1	–	–	1
Gadidae sp.	–	–	6	1	–	7
Total identified	*37*	*355*	*354*	*179*	*40*	*965*
small mammal	–	–	–	–	1	1
medium mammal	14	84	42	41	8	189
large mammal	28	227	95	78	10	438
mammal	66	209	91	36	31	433
bird	–	–	3	–	–	3
amphibian	–	–	6	–	–	6
Total unidentifiable	*108*	*520*	*237*	*155*	*50*	*1070*
Overall total	*145*	*875*	*591*	*334*	*90*	*2035*

1985; Hambleton 1999; Payne 1973), butchery marks (after Lauwerier 1988; Sykes 2007), metrical data (after von den Driesch 1976; Payne and Bull 1988), gnawing, burning, surface condition, pathology (after Vann and Thomas 2006) and non-metric traits. This information was directly recorded into a relational database (in MS Access) and cross-referenced with relevant contextual information.

Quantification methods applied to the assemblage include the number of identified specimens (NISP), minimum number of elements (MNE), and minimum number of individuals (MNI). The term 'sheep' is used throughout this report to refer to all undifferentiated caprine (ie, sheep/goat) remains.

Results

Preservation condition

Bone preservation was found to be quite variable between the various sites, and also between features and contexts in the same area. In general terms, however, most fragments were in a good to fair state of preservation, with intact cortical surfaces showing little or no signs of erosion. Poorly preserved fragments were noted from all four areas, and the condition of these fragments suggests that they had been reworked from earlier contexts or re-deposited after a period of surface exposure. In the most extreme cases cortical surfaces have been entirely eroded away effacing any butchery evidence.

Gnaw marks were evident on 5% of bone fragments, most of which are from Area 503. This suggests that scavenging dogs had greater access to accumulations of refuse there than at the other investigated sites on the peninsula.

Middle–Late Iron Age

A small number of bone fragments were recovered from Middle–Late Iron Age contexts in Area 500, and Trenches 168 and 327. Poor preservation conditions and high levels of fragmentation mean that the assemblage is skewed towards the survival of more robust elements such as teeth, small compact bones from the ankle and foot, and the distal ends of some long bones (eg, the tibia).

Sheep/goat skeletal elements account for 62% NISP (Table 3.11), and the majority are from spread 20060 in Area 500. Other identified species include cattle, pig and horse.

Romano-British

A modest-sized assemblage of animal bone was recovered from late Romano-British features and deposits in Area 501, with smaller amounts from Trenches 316, 321, 324 and 327 in Area E. Approximately 41% of this material is identifiable to species and skeletal element, with relatively large

Table 3.12 Relative frequency of livestock species by NISP, MNE and MNI

Species	*Romano-British*		*Medieval*		*Post-medieval*	
	NISP	%	NISP	%	NISP	%
cattle	86	*28.5*	113	*36*	42	*25*
sheep	211	*67.5*	183	*58.5*	102	*62*
pig	12	*4*	17	*5.5*	22	*13*
Total	*309*	*100*	*313*	*100*	*166*	*100*
	MNE	%	MNE	%	MNE	%
cattle	54	*26*	72	*33*	30	*25*
sheep	148	*70*	133	*61*	72	*60*
pig	9	*4*	13	*6*	18	*15*
Total	*211*	*100*	*218*	*100*	*120*	*100*
	MNI	%	MNI	%	MNI	%
cattle	4	*25*	3	*25*	2	*16.5*
sheep	10	*62.5*	7	*58*	8	*67*
pig	2	*12.5*	2	*17*	2	*16.5*
Total	*16*	*100*	*12*	*100*	*12*	*100*

groups recovered from contexts associated with two discrete spreads of stone rubble (20204 and 20213). The assemblage is dominated by bones from livestock species, which together account for 87% NISP (Table 3.11). Based on NISP, MNE and MNI calculations it is clear that the pastoral economy of the peninsula during this period was primarily based on sheep farming. Sheep account for between 62–70% of livestock, while cattle account for between 25–28%, and pig only 12–14% depending on the method of quantification (Table 3.12).All parts of the sheep are present in the assemblage, including loose teeth and small bones from the foot and ankle. The body part information indicates that whole carcasses are represented, and this is a general indication that sheep were slaughtered and butchered on the site. Indeed, the most common sheep elements are the mandible, distal tibia and metapodials, all of which are considered to represent primary butchery waste. The body part data is, however, slightly skewed by three associated bone groups (or ABGs), one each from palaeochannel 20721, and stone spreads 20204 and 20213. The remains from the palaeochannel consist of the skull, mandibles and lower fore- and hind-quarters from at least two animals (ABG 53), one aged between 3–4 years and the other between 4–6 years. The group (ABG 47) from stone spread 20204 is largely composed of post-cranial elements, in particular foot bones such as metapodials and phalanges. These are from a minimum of at least three animals aged between 1½–2 years. The group (ABG 51) from stone spread 20213 is particularly interesting since it is apparently associated with the burial of a human neonate. The remains consist of post-cranial bones from the fore- and hind-quarters of at least two animals aged over 3 years.

The body part data for cattle also indicates that these animals were brought to the site on the hoof where they were slaughtered and butchered for local consumption. Mandible and other cranial fragments (eg, pieces of skull, horn cores and loose teeth) are particularly common from the stone spreads, which suggests perhaps that these areas are where animal carcasses were processed or at least where primary butchery waste was dumped. The overall number of pig bones is very small, but there is enough of a range of different skeletal elements to suggest that whole pig carcasses are represented.

Age information based upon mandibular tooth wear and the epiphyseal fusion state of post-cranial bones is quite limited and only provides a rough indication of mortality patterns amongst livestock species. All of the 17 sheep mandibles recovered from Romano-British contexts are from animals over the age of 2–3 years. Indeed 35% of sheep were culled in this age group, a further 30% between 3–4 years and the remainder between 4–6 years. A more intensive mortality pattern is suggested by the epiphyseal fusion data, which indicates that almost half of sheep were culled before the age of 2 years. The overall pattern suggests that sheep husbandry was geared towards a range of products, some sheep were culled to provide prime meat, whilst others were maintained as wool producers and breeding stock.

Only six cattle mandibles were recovered and these are from a range of different ages including calves aged 8–18 months and senile animals. This is largely confirmed by epiphyseal fusion data which indicates that 9% of cattle were culled as calves, a further 16% at *c.* 2–2½ years, and the rest as mature adults. This information, although limited, appears to suggest that cattle were primarily managed for secondary products such as milk, and that prime beef

Table 3.13 Number and percentage of fused epiphyses

Fusion category	*Romano-British*			*Medieval*		
	Fused	*Unfused*	*% fused*	*Fused*	*Unfused*	*% fused*
Cattle						
early	10	1	91	16	3	84
intermediate	6	2	75	8	2	80
late	1	2	33	1	5	17
final	5	1	83	1	1	50
Sheep						
early	17	–	100	19	–	100
intermediate I	15	9	63	30	6	83
intermediate II	8	7	53	13	10	57
late	–	3	0	1	1	50
final	12	17	41	3	4	43

Fusion categories after O'Connor (1989). Fused and fusing epiphyses are amalgamated. Only unfused diaphyses, not epiphyses are counted

production was only a minor concern. It is also highly likely that cattle were used as traction animals, in particular to plough the heavy clay fields on the peninsula.

Pigs appear to have been culled at a young age judging by the unfused state of post-cranial bones and a single mandible from a young animal aged between 7–14 months. This mortality pattern is fairly typical for pigs largely because they do not produce any secondary products, are relatively fecund and reach full body weight at a younger age than other livestock species.

Butchery marks are comparatively scarce but do nevertheless provide evidence for a range of different processes, including skinning, dismemberment, secondary portioning, filleting, and even specialist preparation techniques such as curing. Evidence for the latter was seen on cattle scapulae recovered from stone spreads 20204 and 20213, and takes the form of cut marks on the medial side of the distal end and nick marks along the cervical margin of the blade. Cured meat has a longer shelf-life than fresh meat, and is likely to have been stored for use over the lean winter months. Cured shoulder joints of beef were also popular in urban areas during the late Romano-British period (see for example Dobney *et al.* 1996, 24–8), although here their consumption had more to do with Romanising influences on diet and less to do with self-sufficiency and food security.

In addition to evidence for the processing of animal carcasses for food, there is also limited evidence for horn-working. The evidence includes several sawn fragments of cattle horn core from stone spreads 20204 and 20213.

Horse and dog are the only other identified species from the late Romano-British assemblage. Horse bones are common, accounting for 12% NISP, and the majority are from stone spread 20213 (includes ABG 58 – a near complete skull). The range of skeletal elements is consistent with the presence of whole carcasses; however, the number of metapodials relative to other skeletal elements is quite high, and one possible explanation for this is that horse metapodials were selectively retained or procured as raw material for object manufacture. For example, two metapodials from 20213 had been trimmed at either end and along the length of the shaft to produce uniform cylinders of bone ready for further modification or adornment.

Dog is represented by just three bones, a scapula and humerus from Area 501, and a mandible from one of the evaluation trenches in Area E.

Medieval

The medieval assemblage is smaller than the late Romano-British assemblage but includes roughly the same number of identified fragments (Table 3.11). A large proportion (62%) of the assemblage is from Area 503, a further 18% from Area 502, and the rest from a few evaluation trenches, notably those targeting moated sites (eg, Trenches 160, 165 and 167). Approximately 60% of fragments are identifiable to species and skeletal element, and relatively large groups were recovered from stone spread 20504 in Area 502 and from ditch 21166 in Area 503.

The medieval assemblage is also dominated by bones from livestock species, which together account for 88% NISP. All three main quantification methods (NISP, MNE and MNI) indicate that sheep-farming was the mainstay of the local rural economy, much as it was during the Romano-British period, with sheep accounting for between 58–61% of livestock (Table 3.12).

All parts of the mutton and beef carcass are represented in the assemblage, which suggests that livestock were brought to the site on the hoof to be slaughtered and butchered for local consumption.

Common elements include sheep distal tibia, and cattle mandibles and foot bones, all of which are generally discarded at the primary butchery stage of the carcass reduction sequence. There are, however, no large or obvious concentrations of butchery waste to indicate that certain activities were spatially organised; rather it would seem that the assemblage derives from mixed deposits of bone waste. For example, the relatively large group of material from stone spread 20543 includes a number of cattle mandibles and foot bones, but equal numbers of good quality meat joints from the upper forequarter.

Only 17 pig bones were recovered, and the majority are from Area 503. Both cranial and post-cranial elements are present, therefore it is likely that these animals were also slaughtered on the site.

Only a small number of complete mandibles were recovered from medieval contexts, and these are from sheep aged between 2–4 years, and cattle aged between 8–18 months and senile. This basic pattern is confirmed by the epiphyseal fusion data, which indicates that the majority of sheep survived beyond 2 years of age, while some cattle (*c.* 16%) were culled as calves but the rest survived into adulthood (Table 3.13). Age information for pig is extremely limited but suggests that these were culled as immature animals bred entirely for meat.

Butchery evidence is also quite scarce on bones in the medieval assemblage. Nevertheless there was evidence for a number of different processes in the carcass reduction sequence, and even some, albeit limited evidence for specialist preparation techniques such as curing. Evidence for the latter was noted on a cattle and a pig scapula from two of the moated sites targeted in the evaluation.

The rest of the assemblage is made up of a diverse range of other species, including domestic and wild mammals, birds and fishes (Table 3.11). The horse bones were scattered between contexts, and are from both juvenile and adult animals. Butchery marks consistent with skinning and dismemberment were noted on a few horse bones, indicating that horse carcasses were utilised for their hides and meat. The latter was probably intended as dog food given the general aversion to the consumption of horseflesh during the medieval period.

The only other identified mammal from the medieval assemblage are dog and stoat, the latter is represented by three bones from ditch 21412 in Area 503.

The bird bone assemblage includes a small number of fragments from domestic fowl, goose, duck and crow. One of the domestic fowl bones, a complete tarso-metatarsus from ditch 21413 in Area 503, is from an extremely small cockerel, roughly the size of a bantam. The size of the goose and duck bones indicates that these are also from domestic birds.

Fish bone was recovered from a number of sample residues. Identified species include roker (*Raja clavata*), ling (*Molva molva*), and possibly cod (*Gadus morhua*), or at least a similar-sized *Gadidae*. All of these species can be caught off the coast of Britain, and the site is ideally placed to take advantage of coastal resources.

Post-medieval

A small amount of animal bone was recovered from post-medieval contexts in Areas 502 and 503. Fifty-four percent of fragments are identifiable to species (Table 3.11), and relatively large groups were recovered from ditch 21048, latrine pit 21165, and cobbled surface 21422 in Area 503.

Sheep bones are common and account for 57% NISP. All parts of the mutton carcass are represented, and common elements include mandibles and metapodials. These elements are usually discarded at the primary butchery stage, however the metapodials are frequently left attached to the skin because they are useful during the tanning process (eg, for hanging and stretching; see Yeomans 2007, 111). The largest concentration of metapodials is from latrine pit 21165 at the north end of Area 503.

The group includes equal numbers of metacarpals and metatarsals from a minimum of seven sheep, as well as skull fragments from a juvenile and adult animal. Approximately 40% of the metapodials have unfused epiphyses and are therefore from sheep under the age of 13–16 months; the rest are from sheep over the age of 1½–2 years. The average withers (or shoulder) height of these animals is 0.54 m, with a range of 0.48–0.62 m. The size range is similar to the sheep from post-medieval Exeter in Devon (Maltby 1979, 183 and 185), which varied from 0.47 m to 0.63 m at the shoulder. It has not been possible to determine if there were any changes in the size or conformation of livestock that might be associated with improvements in husbandry techniques brought about by the 'agricultural revolution' (Albarella and Davis 1996, 58; Albarella *et al.* 2009, 91), which some historians suggest was an earlier and more gradual processes than is often claimed (Kerridge 1967). However, Maltby (1979, 51) noted that at Exeter '*the improvement in size of sheep in the post-medieval period was not reflected in the estimation of withers heights, which showed at most a small increase*.'

Cattle are the second most common species after sheep, accounting for 23% NISP, while pig bones account for only 12% NISP. Most parts of the beef and pork carcass are represented, which suggests that cattle and pigs were slaughtered locally, perhaps even within the confines of the moated site itself.

The available age information suggests that sheep were culled between the ages of 2–3 years and 8–10

years, and this pattern is consistent with a mixed economy based on the production of wool and prime mutton. From the limited data it would appear that most cattle were culled as adult animals, while most pigs were less than 2 years of age when selected for slaughter.

The post-medieval assemblage also includes a small number of horse, dog, and domestic fowl bones, and single bones from a roe deer and fish of the *Gadidae* family.

Discussion

Analysis of the animal bone assemblage recovered from the four excavation areas on the Steart Point peninsula indicates that the Romano-British and medieval pastoral economy was similar to the present day and largely based upon sheep-farming, which is generally more suited to exposed areas with rough pasture fields that are prone to seasonal waterlogging. Prior to land reclamation the peninsula was probably only used on a seasonal basis, to farm and graze livestock, as for example at Hallen, near Avonmouth (Gardiner *et al.* 2002); however, once drained and protected from high tides behind embankments the land could be grazed all year round (Rippon 2000a). Indeed, by the 13th century, the monastic estates of Glastonbury Abbey grazed a significant number of its 7000 head of sheep along the coast (Trow-Smith 1957).

The general composition of the animal bone assemblages recovered from the larger excavation areas (ie, 501 and 503) is typical of the type of mixed bone waste that accumulates in and around settlement sites where animals are brought in from the surrounding fields to be slaughtered and butchered for local consumption, and carcass bi-products such as hides, horns and bones are also utilised. This self-sufficiency is also evident in some of the specialist butchery techniques employed to preserve meat for use over the lean winter months.

Chapter 4
Environmental Evidence

Charred Plant Remains

by Sarah F. Wyles

Introduction

A total of 41 bulk samples from across the site was processed for the recovery of charred plant remains and wood charcoal from a range of features of Middle–Late Iron Age, Romano-British and medieval to post-medieval date. Following assessment, a selection of 24 samples was made for further analysis of the charred plant assemblages.

These 24 samples break down into:

- four from Middle–Late Iron Age deposits, comprising three from spreads 20003, 20031 and 20152 in Area 500 and one from ditch 16807 in Trench 168;
- 10 from late Romano-British deposits, comprising two from spreads 20263 and 20204, four from ditches 20722, 20362 and 20262, and one from gully 20729 in Area 501, and three from ditches 32108, 32706 and 32743 in Area E;
- 10 from medieval and post-medieval deposits, comprising one from enclosure ditch 20565 (12th/13th century) in Area 502; one from the construction cut (21087) for latrine 21165 (possibly 16th century), one from pit 21353 (broadly medieval), one from posthole 21318 (broadly medieval), four from ditches 21166 (radiocarbon dated, see Wyles and Barclay, below), 21048 (16th/17th century) and 21412 (11th/12th-century) and one from gully 21322 in Area 503 (radiocarbon dated, see below), and one from ditch 16507 (11th/12th century) in Trench 165.

A number of charred remains were radiocarbon dated from these samples. A Romano-British date of cal AD 130–340 (1793±30 BP, SUERC-42511) was obtained on spelt wheat (*Triticum spelta*) glume bases from ditch 20262 in Area 501. A medieval date of cal AD 1020–1220 (911±30 BP, SUERC-42512) was obtained on free-threshing wheat grains (*Triticum turgidum/aestivum* type) from ditch 21166, and a medieval date of cal AD 1010–1160 (956±30 BP, SUERC-42513), again on free-threshing wheat grains, from gully 21322, both in Area 503.

Methodology

The bulk samples for charred remains were generally of 30 litres and were processed by standard flotation methods; the flot retained on a 0.5 mm mesh, residues fractionated into 5.6 mm, 2 mm and 1 mm fractions. The coarse fractions (>5.6 mm) were sorted for artefacts and ecofacts, weighed and discarded.

At the analysis stage, all identifiable charred plant macrofossils were extracted from the flots, together with the 2 mm and 1 mm residues. Identification was undertaken using stereo incident light microscope at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Stace (1997) for wild species and the traditional nomenclature as provided by Zohary and Hopf (2000, tables 3 and 5), for cereals and with reference to modern reference collections where appropriate, quantified and the results tabulated in Tables 4.1–4.3.

Results

Middle–Late Iron Age

Area 500

The three moderately rich charred plant assemblages from Middle–Late Iron Age spreads in this area were dominated by cereal remains. These were mainly those of hulled wheat, emmer or spelt (*Triticum dicoccum/spelta*), with a few grains and rachis fragments of barley (*Hordeum vulgare*) recovered from spread 20003. The chaff elements greatly outnumbered the grains in these assemblages. The majority of the glume bases identifiable to species were those of emmer wheat (*Triticum dicoccum*) with a few of spelt wheat (*Triticum spelta*) also present.

There were also a few fragments of hazelnut (*Corylus avellana*) shell in two of the samples and thorns of sloe/hawthorn type (*Prunus spinosa/Crataegus monogyna*). The small weed seed assemblages included larger seeded weed species, in particular those of oats (*Avena* sp.) and brome grass (*Bromus* sp.), typical arable weed seeds. Other weed seeds present which are indicative of grassland, field margins and arable environments include those of vetch/wild pea (*Vicia/Lathyrus* sp.), rye-grass/fescue (*Lolium/Festuca* sp.), bedstraw (*Galium* sp.),

Table 4.1 Charred plant remains from Middle–Late Iron Age features in Area 500 and Trench 168

		Area		500		Tr 168
		Feature type		Spreads		Ditch
		Group	–	20031	20152	
		Cut	–	–	–	16807
		Context	20003	20046	20099	16809
		Sample	5	15	38	81
		Vol (L)	30	30	30	30
		Flot size	60	26	26	28
Cereals	Common Name					
Hordeum vulgare L. sl (grain)	barley		3	–	–	–
Hordeum vulgare L. sl (rachis frag)	barley		4	–	–	–
Triticum dicoccum (Schübl) (glume base)	emmer wheat		13	7	2	8
Triticum dicoccum (Schübl) (spikelet fork)	emmer wheat		–	1	–	2
Triticum spelta L. (glume bases)	spelt wheat		2	1	1	4
Triticum dicoccum/spelta (grain)	emmer/spelt wheat		4	1	1	2
Triticum dicoccum/spelta (spikelet fork)	emmer/spelt wheat		5	–	1	7
Triticum dicoccum/spelta (glume bases)	emmer/spelt wheat		109	55	21	68
Cereal indet. (grains)	cereal		7	–	3	2
Cereal frag. (est. whole grains)	cereal		6	2	2	2
Other Species						
Corylus avellana L. (fragments)	hazelnut		26 (1 ml)	4 (<1 ml)	–	2 (<1 ml)
Chenopodium sp.	goosefoot		1	1	–	1
Atriplex sp. L.	oraches		1	–	–	–
Rumex sp. L.	docks		1	1	–	–
Prunus spinosa/Crataegus monogyna (thorns/twigs)	sloe/hawthorn type thorns		1	–	–	–
Vicia L./*Lathyrus* sp. L.	vetch/wild pea		–	1	1	1
Medicago/Trifolium sp. L.	medick/clover		–	1	–	–
Sherardia arvensis L.	field madder		–	–	–	1
Galium sp. L.	bedstraw		1	–	–	–
Lolium/Festuca sp.	rye-grass/fescue		1	–	–	1
Poa/Phleum sp. L.	meadow grass/cat's-tails		–	1	–	–
Avena sp. L. (grain)	oat grain		1	2	1	–
Avena sp. L. (floret base)	oat floret		–	–	–	1
Avena L./*Bromus* L. sp.	oat/brome grass		6	5	2	1
Bromus sp. L.	brome grass		3	–	–	2

goosefoot (*Chenopodium* sp.), oraches (*Atriplex* sp.), docks (*Rumex* sp.), clover/medick (*Trifolium/Medicago* sp.) and meadow grass/cat's-tails (*Poa/Phleum* sp.).

Trench 168

The moderate assemblage from a Middle–Late Iron Age deposit in ditch 16807 was dominated by cereal grains, with only those of hulled wheat being identified. Again, the glume bases greatly outnumbered the grain fragments, and those identifiable as emmer were more numerous than those of spelt.

A few fragments of hazelnut shell and sloe/hawthorn type thorns were also recovered. The small weed seed assemblage was similar to that recorded from the spread samples but also included a seed of field madder (*Sherardia arvensis*).

Late Romano-British

Area 501

The seven samples from late Romano-British spreads, ditches and a gully contained large charred plant assemblages, in particular from spread 20204 and ditches 20722 and 20362. In six of these samples cereal remains were predominant, and in all seven samples glume fragments outnumbered those of grains. The cereal remains were dominated by those of hulled wheat, mainly those of spelt wheat, although there were a few remains of emmer wheat in the assemblages from the two spreads and ditch 20362. Small numbers of barley grains and rachis fragments were noted in six of the samples, most numerous in ditch 20729. Large quantities of silicified awn fragments were present in the samples from ditch 20362. Although the assemblage was dominated by weed seeds, the cereal remains were mainly those of hulled wheat, with identifiable remains being those of spelt wheat, as seen in the other assemblages. There was also a single rachis fragment of free-threshing wheat (*Triticum turgidum/aestivum*) type.

Other possible crop remains included celtic bean (*Vicia faba*) in six of the assemblages and seeds of flax (*Linum usitatissimum*) in ditch 20262. There were also a few fragments of hazelnut shell and sloe (*Prunus spinosa*) stone, hawthorn/sloe type thorns, and of possible tubers in a number of the samples.

The weed seed assemblages were dominated by seeds of clover/medick, docks and rye-grass/fescue. Other weed seeds included those of vetch/wild pea, oat, brome grass, meadow grass/cat's-tails, goosefoot, sheep's sorrel, curled dock, oraches, bedstraw, corn gromwell (*Lithospermum arvense*), field madder, red bartsia (*Odontites vernus*), knotgrass (*Polygonum aviculare*) and black bindweed (*Fallopia convolvulus*).

Area E

High numbers of charred remains were recovered from late Romano-British deposits in ditches 32108 and 32716, and a moderately large assemblage from late Romano-British ditch 32743. Cereal remains were predominant in ditches 32108 and 32716, with glumes outnumbering cereal remains. As with the late Romano-British assemblages from Area 501, the cereal remains were mainly those of hulled wheat, with spelt wheat being dominant. Glume bases were also dominant in the cereal element in the assemblage from ditch 32746, although the weed seeds were more numerous.

Celtic bean fragments were recorded in all three assemblages and possible pea (*Pisum sativum*) and flax in one of them. There were also a few fragments of hazelnut shell, sloe stones, sloe/hawthorn thorns and tubers including those of false oat-grass (*Arrhenatherum elatius* var. *bulbosum*).

The weed seeds were mainly those typical of grassland, field margins and arable environments. These included seeds of clover/medick, oat, brome grass, rye-grass/fescue, vetch/wild pea, docks, meadow grass/cat's-tails and goosefoot and smaller numbers of seeds of fat-hen (*Chenopodium album*), oraches, black bindweed, sheep's sorrel, curled dock, brassica (*Brassica* sp.), red bartsia, field madder, bedstraw, stinking mayweed (*Anthemis cotula*) and scentless mayweed (*Tripleurospermum inodorum*). There were also a small number of seeds indicative of wetter areas such as marshy areas or river channel edge environments. These included seeds of common spike-rush (*Eleocharis palustris*), sedge (*Carex* sp.) and branched bur-reed (*Sparganium erectum*).

Medieval and post-medieval

Area 502

The sample from medieval ditch 20565 contained high numbers of charred plant remains, dominated by the weed seeds. The cereal remains were predominantly those of free-threshing wheat, with a small number of barley remains. There were also remains of celtic beans. The weed seeds included seeds of oats, brome grass, vetch/wild pea, clover/medick, stinking mayweed and rye-grass/fescue, with smaller numbers of goosefoot, oraches, docks, brassica, henbane, corn gromwell, red bartsia, field madder, meadow grass/cat's-tails and common spike-rush.

Area 503

Large quantities of charred plant remains were recovered from pit 21353, posthole 21318, ditch 21412 and gully 21322, moderately high numbers from the construction cut for latrine 21165 and ditch 21166, and a small amount from ditch 21048.

Cereal remains were predominant in the assemblages from latrine 21165, pit 21353, posthole 21318, ditch 21412 and gully 21322, while weed seeds were most numerous in ditch 21166. The small assemblage from post-medieval ditch 21048 comprised almost equal numbers of cereal remains and weed seeds. Grain fragments outnumbered chaff elements within all eight assemblages. Free-threshing wheat was the predominant cereal present, with a few remains of barley being recorded in four of the assemblages and hulled wheat glume bases in two of them.

Other possible crop remains included those of celtic beans in seven of the assemblages and possible pea in ditch 21048. Flax seeds were present in the assemblage from pit 21353 and triangular capsule fragments, possibly of flax, from pit 21353 and ditch 21166. A number of the oats may be of the cultivated variety. There were also a few fragments of hazelnut shell, hawthorn (*Crataegus monogyna*) and tubers.

Once again the weed seed assemblages were dominated by those species typical of grassland, field margins and arable environments. These included seeds of oat, brome grass, vetch/wild pea, clover/medick and stinking mayweed and small numbers of docks, buttercup (*Ranunculus* sp.), goosefoot, oraches, corncockle (*Agrostemma githago*), brassica, possible black mustard (*Brassica* cf. *nigra*), possible grass vetchling (*Lathyrus* cf. *nissolia*), henbane (*Hyoscyamus niger*), red bartsia, field madder, narrow-fruited cornsalad (*Valerianella dentata*), oxeye daisy (*Leucanthemum vulgare*), scentless mayweed, thistle (*Carduus*/*Cirsium* sp.) and oxtongues (*Picris* sp.). There were also a small number of seeds indicative of wetter areas. These included seeds of common spike-rush, sedge and marsh sow-thistle (*Sonchus* cf. *palustris*).

Trench 165

The large assemblage from the medieval ditch in Trench 165 was dominated by cereal remains, in particular by grains of free-threshing wheat. There were also a few grains of barley, and a few celtic bean fragments. Other remains include hazelnut and hawthorn shell fragments. The weed seeds included seeds of oat/brome grass, vetch/wild pea, docks, clover/medick, rye-grass/fescue, goosefoot, oraches, stinking mayweed and common spike-rush.

Table 4.2 Charred plant remains from late Romano-British features in Areas 501 and E

	Area	501							Area E	
	Feature type	Spreads		Ditches			Gully		Ditches	
	Group	20263	20204	20722	20362	20362	20262	20729	–	–
	Cut	–	20377	6303	6309	20235	20245	20297	32108	32716	32743
	Context	20266	20379	6306	6317	20259	20244	20299	32110	32715	32751
	Sample	117	131	3	4	116	102	125	400	402	405
	Vol (L)	30	30	30	20	1	30	30	30	30	30
	Flot size	25	70	40	110	28	120	34	75	44	27
Cereals	Common Name										
Hordeum vulgare L. sl (grain)	barley	–	2	1	1	1	6	1	3	1	–
Hordeum vulgare L. sl (grain still in husk)	barley	–	1	–	–	–	–	–	–	–	–
Hordeum vulgare L. sl (rachis frag)	barley	–	–	3	–	–	21	–	9	3	v
Triticum dicoccum (Schübl) (glume base)	emmer wheat	2	3	–	1	–	–	–	4	15	cf. 2
Triticum dicoccum (Schübl) (spikelet fork)	emmer wheat	–	–	–	1	–	–	–	1	2	v
Triticum spelta L. (glume bases)	spelt wheat	51	52	100	35	6	50	14	220	80	27
Triticum spelta L. (spikelet fork)	spelt wheat	–	3	–	1	2	–	–	2	2	–
Triticum dicoccum/spelta (grain)	emmer/spelt wheat	16	75	29	23	17	15	6	18	7	5
Triticum dicoccum/spelta (germinated grain)	emmer/spelt wheat	–	–	3	–	–	–	–	4	–	–
Triticum dicoccum/spelta (spikelet fork)	emmer/spelt wheat	14	11	28	17	9	20	5	62	38	3
Triticum dicoccum/spelta (glume bases)	emmer/spelt wheat	490	580	876	557	30	382	213	1220	750	65
Triticum turgidum/aestivum (rachis frags)	free-threshing wheat	–	–	–	–	1	–	–	–	–	–
Cereal indet. (grains)	cereal	39	89	50	65	9	34	28	45	6	5
Cereal frag. (est. whole grains)	cereal	45	40	25	25	2	15	25	10	1	5
Cereal frags (culm node)	cereal	–	–	3	–	–	2	–	5	–	4
Cereal frags (awns- silicified)	cereal	–	–	–	++	+++	–	–	–	–	–
Cereal frags (coleoptile)	cereal	–	–	–	–	–	1	–	5	–	v
Other Species											
Ranunculus sp.	buttercup	–	–	–	–	3	3	–	2	-	–
Corylus avellana L. (fragments)	hazel	–	–	–	–	–	2 (<1 ml)	–	–	3 (<1 ml)	–
Chenopodiaceae	goosefoot family	–	–	–	–	–	–	1 (S)	–	–	–
Chenopodium sp.	goosefoot	–	5	7	2	1	17	14	15	4	3
Chenopodium album L.	fat-hen	–	2	–	2	–	–	–	7	–	–
Atriplex sp. L.	oraches	2	2	11	1	–	4	2	3	1	3
Stellaria sp. L.	stitchwort	–	–	–	–	–	–	1	–	–	–
Persicaria lapathifolia/maculosa (L.) Gray/Gray	pale persicaria/redshank	–	1	2	1	1	–	–	–	–	–
Polygonum aviculare L.	knotgrass	1	–	1	4	3	5	1	–	–	2
Fallopia convolvulus (L.) À. Löve	black bindweed	–	–	1	4	1	1	1	3	1	1
Rumex sp. L.	docks	12	62	45	78	256	68	16	34	14	19
Rumex acetosella group Raf.	sheep's sorrel	–	–	–	3	11	–	–	–	–	1

Rumex crispus L. Type	curled dock	–	–	-	20	61	6	–	–	–	3
Brassica sp. L.	brassica	–	–	-	–	–	–	2	4	1	2
Prunus spinosa	sloe stone	–	–	1	–	–	–	–	1	–	–
Prunus spinosa/Crataegus monogyna (thorns/twigs)	sloe/hawthorn type thorns	–	–	–	-	–	–	–	–	1	–
Vicia L./*Lathyrus* sp. L.	vetch/wild pea	28	28	14	24	16	11	3	31	6	21
Vicia faba	celtic bean	5	13	–	4	4	6	1	10	2	11
Vicia faba/Pisum sativum	celtic bean/pea	–	–	–	–	–	–	–	5	–	–
Lathyrus cf. *nissolia* L.	grass vetchling	–	–	–	–	1	–	–	2	–	–
Medicago/Trifolium sp. L.	medick/clover	25	61	116	112	792	39	23	318	7	45
Linum usitatissimum L.	flax	–	–	–	–	–	–	2	1	–	–
Torilis sp. Adans	hedge-parsley	–	–	–	1	–	–	–	–	–	–
Lithospermum arvense L.	corn gromwell	–	–	–	–	–	1	–	–	–	–
Plantago lanceolata L.	ribwort plantain	–	–	2	6	1	–	2	1	–	–
Odontites vernus	red bartsia	–	–	1	–	–	–	–	2	–	2
Sherardia arvensis L.	field madder	–	–	1	–	2	1	–	1	–	–
Galium sp. L.	bedstraw	1	12	8	2	–	11	8	3	1	–
Crespis sp. L.	hawk's-beard	–	–	–	–	cf.1	–	–	–	–	–
Anthemis cotula L. (seeds)	stinking mayweed	–	–	–	–	–	–	–	3	–	10
Tripleurospermum inodorum (L.) Sch. Bip.	scentless mayweed	–	–	–	–	–	–	–	2	–	–
Eleocharis cf. *palustris* (L.) Roem. & Schult.	common spike-rush	–	–	–	–	–	–	–	1	1	4
Carex sp. L. trigonous	sedge trigonous seed	–	–	1	–	–	–	–	–	–	1
Carex sp. L. flat	sedge flat seed	–	–	–	–	–	–	–	5	–	–
Poaceae culm node	grass	1	3	–	3	6	4	1	1	–	2
Lolium/Festuca sp.	rye-grass/fescue	8	29	68	35	53	60	40	65	12	4
Poa/Phleum sp. L.	meadow grass/cat's-tails	1	7	17	8	54	3	3	14	4	2
Arrhenatherum elatius Var. bulbosum (Willd)	false oat-grass	–	–	–	–	–	–	–	1	–	–
Avena sp. L. (grain)	oat grain	1	28	10	10	17	4	1	3	3	4
Avena sp. L. (floret base)	oat floret	2	5	–	3	7	5	–	7	1	–
Avena sp. L. (awn)	oat awn	1	6	16	17	15	3	–	–	–	–
*Avena*L./*Bromus* L. sp.	oat/brome grass	4	34	28	49	25	26	7	40	24	8
Bromus sp. L.	brome grass	1	2	4	2	4	1	1	4	12	–
Sparganium erectum L.	branched bur-reed	–	–	–	–	–	–	–	1	–	–
Small seed indet.		–	–	–	–	–	–	1	–	–	1
Monocot. stem/rootlet frag		10	7	28	38	17	8	4	25	14	14
Parenchyma/Tuber		1	–	6	–	–	–	–	–	–	–
Tuber		–	–	–	–	–	–	–	1	–	–

Table 4.3 Charred plant remains from medieval and post-medieval features in Areas 503 and 502, and Trench 165

	Area	503								Tr 165	502
	Feature type	Latrine	Pit	Posthole		Ditches			Gully	Ditch	Ditch
	Group	21165			21166	21166	21048	21412	21322		20565
	Cut	21087	21353	21318	21127	21132	21157	21398	21282	16507	20512
	Context	21088	21333	21316	21134	21130	21160	21399	21284	16508	20505
	Sample	300	328	321	302	301	320	332	311	82	200
	Vol (L)	30	30	10	30	30	8	30	6	30	20
	Flot size	200	150	55	37	180	190	75	70	120	30
Cereals	Common Name										
Hordeum vulgare L. sl (grain)	barley	–	2	2	–	3	–	–	–	10	1
Hordeum vulgare L. sl (rachis frag)	barley	–	1	–	–	1	–	2	–	–	1
Triticum spelta L. (glume bases)	spelt wheat	–	–	–	–	–	–	–	1	–	–
Triticum dicoccum/spelta (glume bases)	emmer/spelt wheat	–	–	–	–	1	–	–	–	–	–
Triticum turgidum/aestivum (grain)	free-threshing wheat	30	600	225	30	80	7	350	225	350	55
Triticum aestivum (rachis frag)	free-threshing wheat	–	1	–	–	–	–	–	–	–	–
Triticum turgidum/aestivum (rachis frags)	free-threshing wheat	3	79	31	39	31	2	57	96	9	33
Triticum sp. (grain)	wheat	–	–	–	–	–	–	–	–	–	5
Cereal indet. (grains)	cereal	50	640	900	60	85	15	320	580	825	95
Cereal frag. (est. whole grains)	cereal	24	80	50	29	30	5	30	30	100	20
Cereal frags (culm node)	cereal	2	–	–	3	–	–	2	–	–	–
Cereal frags (awns – silicified)	cereal	–	+	–	–	–	–	–	–	–	+
Cereal frags (awns)	cereal	–	10	–	–	–	–	–	–	–	+
Other Species											
Ranunculus sp.	buttercup	–	–	3	1	2	–	–	–	–	2
Corylus avellana L. (fragments)	hazelnut	–	–	9 (1 ml)	2 (<1 ml)	–	–	1 (<1 ml)	–	3 (<1 ml)	–
Chenopodiaceae	goosefoot family	–	–	–	–	4 (S)	–	–	–	–	–
Chenopodium sp.	goosefoot	2	–	–	1	5	2	1	2	3	5
Atriplex sp. L.	oraches	–	–	–	2	4	–	–	–	3	5
Stellaria sp. L.	stitchwort	–	–	–	–	–	–	–	–	–	1
Agrostemma githago L.	corncockle	–	2	–	–	–	–	–	–	–	–
Polygonum aviculare L.	knotgrass	–	1	1	–	–	1	3	–	–	–
Fallopia convolvulus (L.) À. Löve	black bindweed	–	–	–	–	3	–	–	–	–	–
Rumex sp. L.	docks	3	2	9	6	13 + 1 (S)	2	1	–	4	7
Rumex acetosella group Raf.	sheep's sorrel	–	–	–	–	2	–	1	–	–	–
Brassica sp. L.	brassica	–	25	11	2	3	3	1	1	3	4
Brassica cf. *nigra* (L.) W.D.J. Koch	black mustard	–	1	3	–	–	–	–	–	–	–
Prunus spinosa/ *Crataegus monogyna* (thorns/twigs)	sloe/hawthorn type thorns	–	–	–	–	–	–	–	–	–	1
Crataegus monogyna Jacq.	hawthorn	2	–	–	–	–	–	–	–	1	–
Vicia L./*Lathyrus* sp. L.	vetch/wild pea	20	116	433	31	52	4	58	1	29	35
Vicia faba	celtic bean	7	38	15	19	20	–	15	9	5	19

Vicia faba/Pisum sativum	celtic bean/pea	–	–	–	–	–	1	–	–	–	–
Lathyrus cf. *nissolia* L.	grass vetchling	–	2	12	–	–	–	–	–	1	–
Medicago/Trifolium sp. L.	medick/clover	7	8	6	58	43	3	7	3	4	33
Linum usitatissimum L.	flax	–	2	–	–	–	–	–	–	–	–
Hyoscyamus niger L.	henbane	–	–	–	–	–	3	–	–	–	2
Lithospermum arvense L.	corn gromwell	–	–	–	–	–	–	–	–	–	1
Plantago lanceolata L.	ribwort plantain	1	–	–	1	–	–	–	–	–	–
Odontites vernus	red bartsia	–	3	–	2	–	–	–	–	–	2
Sherardia arvensis L.	field madder	–	1	3	–	–	–	–	–	–	3
Valerianella dentata (L.) Pollich	narrow-fruited cornsalad	2	–	–	–	–	–	–	–	–	–
Carduus/Cirsium sp.	thistle	1	2	–	–	–	–	–	–	–	–
Picris sp. L.	oxtongues	–	–	–	–	–	–	1	–	–	–
Sonchus cf. *palustris* L.	marsh sow-thistle	1	–	–	–	–	–	–	–	–	–
Anthemis cotula L. (seeds)	stinking mayweed	1	278	26	26	38	–	70	3	2	75
Anthemis cotula L. (seed head)	stinking mayweed	–	2	–	–	–	–	2	–	–	–
Leucanthemum vulgare Lam.	oxeye daisy	–	21	–	–	–	–	–	–	–	–
Tripleurospermum inodorum (L.) Sch. Bip.	scentless mayweed	–	2	2	–	–	–	3	–	–	–
Eleocharis cf. *palustris* (L.) Roem. & Schult.	common spike-rush	–	–	–	9	–	–	–	–	2	6
Carex sp. L. trigonous	sedge trigonous seed	–	–	–	2	3	–	–	–	–	–
Carex sp. L. flat	sedge flat seed	–	–	2	–	–	–	–	–	–	–
Poaceae culm node	grass	–	7	3	–	4	1	2	1	2	9
Lolium/Festuca sp.	rye grass/fescue	2	95	9	13	10	2	4	–	4	16
Poa/Phleum sp. L.	meadow grass/cat's-tails	–	4	4	3	6	–	2	–	–	10
Avena sp. L. (grain)	oat grain	7	100	40	15	15	–	20	8	3	30
Avena sp. L. (spikelet)	oat spikelet	–	–	–	–	–	–	1	–	–	–
Avena sp. L. (floret base)	oat floret	–	28	–	1	-	–	–	–	–	3
Avena sp. L. (awn)	oat awn	–	12	1	–	2	–	–	1	–	1
Avena L./*Bromus* L. sp.	oat/brome	4	265	75	39	34	7	5	15	10	80
Bromus sp. L.	brome grass	–	6	4	1	1	–	1	3	–	2
Small seed indet.		–	–	3	1	–	–	2	–	–	–
Monocot. stem/rootlet frag		2	9	6	3	24	7	12	–	8	40
Bud		–	–	–	–	–	1	–	1	–	–
Triangular capsule frag		–	5	–	1	–	–	–	–	–	–
Tuber		–	2	–	–	–	–	–	–	–	–

Discussion

Middle–Late Iron Age

The assemblages from this period (Table 4.1) were dominated by hulled wheat remains, in particular those of emmer, with a few remains of barley. Hulled wheat, emmer and spelt, and barley were recorded from Iron Age deposits at Huntworth (Stevens 2008) and RNAS Yeovilton (Pelling 2005), spelt wheat from Hallen, Avon Levels (Gardiner *et al.* 2002) and emmer and spelt wheat from Aller (Simmons 2012). There appears to be a trend for 'more emmer wheat in Iron Age assemblages in this area than is seen on sites on the Hampshire chalk lands and in the Thames Valley' (Simmons 2012; Campbell and Straker 2003). The assemblages are likely to be indicative of waste derived from the dehusking of hulled grain stored as semi-cleaned grain or in spikelet form (Hillman 1981; 1984). The small weed seed assemblages are typical of those from grassland, field margins and arable environments. There is also the possible occasional exploitation of a local hedgerow or scrub environment as indicated by the presence of hazelnut shells and hawthorn/sloe thorn fragments.

Late Romano-British

Spelt wheat was the dominant cereal, with small quantities of emmer wheat and barley, in these assemblages (Table 4.2), as is typical over much of England during the Romano-British period (Greig 1991). For example, in the south-west, spelt wheat was the dominant cereal, although barley and emmer wheat were present in low quantities in some assemblages from Romano-British deposits at Plot 4000, Avonmouth (Ritchie *et al.* 2007), RNAS Yeovilton (Pelling 2005), and Banwell Moor, North Somerset Levels (Jones 2000). Spelt wheat and barley were also recorded in assemblages from Crook's Marsh along the Pucklechurch to Seabank pipeline, Avonmouth (Masser *et al.* 2005) and Kenn Moor, North Somerset Levels (Jones 2000).

The eight assemblages which were glume-rich are again likely to be representative of waste from the dehusking of hulled grain stored as semi-cleaned grain or in spikelet form. The generally increased presence of intermediate weed seeds amongst the assemblages, such as medick/clover, docks and rye-grass/fescue, over those seen in the Middle/Late Iron Age assemblages may indicate that some of this waste material had been created by the release of these weed seeds by the pounding process after storage. The two assemblages where weed seeds, in particular smaller-seeded species, outnumbered cereal remains may be the waste derived from an earlier stage of processing, namely when the crops had been harvested, threshed and winnowed, and coarse- and fine-sieved in preparation for drying, prior to storage as semi-clean grain or spikelets. Large quantities of silicified awns, as seen in two of the ditches, were also noted in high numbers in a few of the assemblages from late Romano-British deposits at both Kenn Moor and Banwell Moor, North Somerset Levels (Jones 2000). These may be indicative of the burning of chaff elements as fuel.

Celtic beans were also recorded at Plot 4000 Avonmouth (Ritchie *et al.* 2007), RNAS Yeovilton (Pelling 2005), Crook's Marsh, Avonmouth (Masser *et al.* 2005) and Banwell Moor, North Somerset Levels (Jones 2000). Celtic beans and flax were recovered from Kenn Moor, North Somerset Levels (*ibid.*)

The weed seed assemblages are dominated by species typical of those from grassland, field margins and arable environments. There is an indication of the exploitation of a number of different soils, with the possible use of sandier soils shown by the presence of sheep's sorrel, and of heavier clay soils as indicated by the seeds of red bartsia and stinking mayweed, together with lighter drier calcareous soils as favoured by species such as field madder and corn gromwell. Spelt wheat is a hardy cereal which thrives on heavy soils but would suffer from any saltwater inundation (Jones 2000, 126).

The crops are likely to have been harvested by sickle as indicated by the presence of low-growing species such as clover, medick, dock, field madder and corn gromwell, together with the occurrence of twining species such as vetches/wild pea, bedstraw and black bindweed.

Branched bur-reed is found on mud or in shallow water in ponds, ditches and slow-flowing rivers and on ungrazed marshland, reflecting another environment in the locality. This would also be favoured by sedge and common spike-rush. The occasional exploitation of a hedgerow/scrub environment is again indicated by the presence of hazelnut shell, sloe stones and hawthorn/sloe thorns.

An indication of the exploitation of a variety of different environments and soil types was also observed in some of the assemblages from Romano-British deposits at Plot 4000, Avonmouth (Ritchie *et al.* 2007), RNAS Yeovilton (Pelling 2005) and Kenn Moor and Banwell Moor, North Somerset Levels (Jones 2000).

Medieval and post-medieval

The cereal remains from medieval and post-medieval features (Table 4.3) are dominated by free-threshing wheat with low levels of barley and a few hulled wheat fragments. This is typical of assemblages of this date, as free-threshing wheat, along with rye and barley, is the commonplace cereal recovered from charred

assemblages in southern England during the Anglo-Saxon and medieval periods (Greig 1991). The grain-rich assemblages are indicative of the waste from stored grain. The majority of the chaff elements of free-threshing wheat tend to be removed in the field by threshing and winnowing prior to storage. Other possible crops were celtic beans, peas, oats and flax. Free-threshing wheat and barley were recorded from late Saxon deposits at Aller (Simmons 2012), while free-threshing wheat, barley, rye and celtic beans were recovered from a medieval ditch at Huntworth (Stevens 2008) and from medieval deposits at Whitegate Farm, Bleadon (Smith 2003) and Shapwick (Straker *et al.* 2007). Free-threshing wheat, barley and celtic beans were also recorded from medieval deposits at Seabank (Insole 1997). The sample from post-medieval ditch 21048 appears to indicate a decrease in the cultivation of cereals, and a corresponding rise in weed seeds, but the assemblage is too small to draw firm conclusions.

As in the late Romano-British period, there is an indication of crops being grown on a number of different soil types, with the use of sandier soils shown by the presence of henbane and sheep's sorrel, of heavier clay soils indicated by red bartsia and stinking mayweed, and of lighter, drier calcareous soils favoured by corn gromwell, field madder and narrow-fruited cornsalad.

Stinking mayweed becomes more common in the Anglo-Saxon and medieval periods (Greig 1991) and is characteristic of the cultivation of heavy clay soils (Green 1984), associated with the change to mouldboard ploughs from ards (Jones 1981; Stevens with Robinson 2004; Stevens 2009) and the general increased cultivation of such heavier soils from the late Saxon period.

Again there is an indication of a wetter environment in the vicinity, with the presence of seeds of common spike-rush, sedge and marsh sow-thistle, and of a hedgerow/scrub area, represented by hazelnut shell, hawthorn stone and sloe/hawthorn thorn fragments. All these came from medieval features.

Summary

The charred plant remains appear to reflect a landscape of small rural settlements with the local cultivation of crops from the Middle–Late Iron Age to medieval and early post-medieval periods. There is an indication of the exploitation and use of areas of lighter calcareous soils, sandier soils and heavier clay soils, as well as hedgerow/scrub, throughout these periods. There is also some evidence for the presence of wetter environments such as areas of shallow fresh-water or ungrazed marshy grassland in the vicinity.

The mollusc evidence (see Wyles, below) indicates fluctuating levels of freshwater and saltwater inundations across the site. The crops would, therefore, have been grown on areas near the site not subjected to saltwater flooding (Jones 2000). Although this area does not appear to have been reclaimed to the extent seen elsewhere in the North Somerset Levels (Rippon 2000b), there were still areas suitable for the cultivation of crops. This rather piecemeal approach to reclamation also seems to have occurred on parts of the Avonmouth Levels (Masser *et al.* 2005), and in general a broad-based pastoral and arable economy, with a variety of crops being grown on a number of soil types, has been indicated by the environmental results from other sites of medieval and post-medieval date in the area.

Wood Charcoal

by Dana Challinor

Five samples were selected for charcoal analysis: from Middle/Late Iron Age spread 20003 in Area 500; late Romano-British ditches 32108 and 32743 in Area E; and two medieval samples from gully 21322 (radiocarbon dated, see Wyles and Barclay, below) and the construction cut for latrine 21165 (possibly 16th-century) in Area 503. The selection was necessarily limited by preservation, as the majority of the assessed samples produced too little identifiable charcoal to merit analysis. The aims were to examine fuel use and woodland resources throughout the phases represented at the site, although in practice the interpretation is limited by the small dataset.

Methodology

A random selection of 50 fragments (30 from sample 400 due to condition) was fully identified, following standard procedures, from the >4 mm and >2 mm fractions from each sample. In practice, the majority of the fragments came from the <4 mm fraction, which led to a higher number of indeterminate fragments. The charcoal was fractured and sorted into groups based on the anatomical features observed in transverse section at x7 to x45 magnifications. Representative fragments from each group were then selected for further examination in longitudinal sections using a Meiji incident-light microscope at up to x400 magnification. Identifications were made with reference to Schweingruber (1990), Hather (2000) and modern reference material. The maturity of the wood was noted where possible and the presence of roundwood,

Table 4.4 Results of the charcoal analysis by fragment count

	Area	500	E	E	503	503
	Phase	M–LIA	LRB	LRB	Med	Med
	Group	–	–	–	21165	21322
	Feature number	–	32108	32743	21087	21282
	Feature type	Spread	Ditch	Ditch	Latrine	Gully
	Context number	20003	32110	32751	21088	21284
	Sample number	5	400	405	300	311
Ulmus sp.	elm	–	–	–	23	–
Quercus sp.	oak	13	21(r)	18(r)	26(r, h)	46 (h, r)
Betula sp.	birch	–	–	2	–	–
Alnus glutinosa Gaertn.	alder	2(r)	–	–	–	–
Corylus avellana L.	hazel	–	2	–	–	–
Alnus/Corylus	alder/hazel	6	5	1	–	1
Prunus spinosa L.	blackthorn	21(r)	–	–	–	–
Prunus avium L.	wild cherry	–	8r	–	–	–
Maloideae	hawthorn grp	3	1	–	–	–
Ilex aquifolium L.	holly	–	–	–	–	3r
Acer campestre L.	field maple	–	–	1	–	–
Fraxinus excelsior L.	ash	–	4 (r)	–	–	–
Indeterminate	bark	4	2	–	1	–
Indeterminate	diffuse porous	–	–	8 (r)	–	–
Indeterminate	–	1	7	–	–	–
Total		50	50	30	50	50

r=roundwood; h=heartwood; brackets denotes some fragments, not all quantified

sapwood and heartwood is noted in the tables. Classification and nomenclature follow Stace (1997).

Results

Most of the samples produced abundant assemblages of charcoal, although the fragment size was frequently small (4–2 mm). The results are presented in Table 4.4. A relatively wide range of 11 taxa was positively identified:

Ulmaceae: *Ulmus* spp., (elm), large tree, several native species, not distinguishable anatomically.

Fagaceae: *Quercus* spp., (oak), large tree, two native species, not distinguishable anatomically.

Betulaceae: *Betula* spp. (birch), trees or shrubs, two native species, not distinguishable anatomically. *Alnus glutinosa*, *Gaertn*., alder, tree, sole native species. *Corylus avellana* L., hazel, shrub or small tree, sole native species. *Corylus* has a very similar anatomical structure to *Alnus* and can be difficult to separate.

Rosaceae: *Prunus spinosa* L. (blackthorn), shrub, and *P. avium* L. (wild cherry), tree. These species can be difficult to distinguish from each other, but were confidently assigned to *P. spinosa* and *P. avium* on the basis of consistently distinct ray widths (wide in sample 5 and narrow in sample 400). Maloideae, subfamily of various shrubs/small trees including several genera, *Pyrus* (pear), *Malus* (apple), *Sorbus* (rowan/service/whitebeam) and *Crataegus* (hawthorn), which are difficult to distinguish anatomically.

Aquifoliaceae: *Ilex aquifolium* L., (holly), evergreen tree or shrub, native.

Aceraceae: *Acer campestre* L. field maple, tree, sole native species.

Oleaceae: *Fraxinus excelsior* L. ash, tree, sole native species.

Middle–Late Iron Age

The single sample from this phase came from spread 20003 in Area 500, and produced a mixed range of taxa including *Quercus* sp. (oak), *Alnus glutinosa* (alder), *Prunus spinosa* (blackthorn) and Maloideae (hawthorn group). Much of the oak had characteristically fragmented into thin slivers, with less than one growth ring visible, making maturity impossible to assess.

Late Romano-British

The charcoal assemblages from ditches 32108 and 32743, in evaluation trenches in Area E, were dominated by fine fragments of *Quercus* sp. (oak), with lesser quantities of other taxa, including *Betula* sp. (birch), *Corylus avellana* (hazel), *Prunus avium* (wild cherry), Maloideae (hawthorn group), *Acer campestre* (field maple) and *Fraxinus excelsior* (ash). The *Prunus* was clearly different to the species identified in sample 5, with significantly and consistently smaller rays (mostly bi-seriate). Particularly notable in sample 400 (ditch 32108) was the quantity of roundwood fragments with strong ring curvature; although incomplete, the presence of occasional pith and/or bark indicated that immature

branchwood was represented. Sample 405 (ditch 32743) was similar in character, but the condition was much poorer.

Medieval and post-medieval
The samples from the construction cut for latrine 21165 and gully 21322 produced fewer taxa; *Ulmus* sp. (elm), *Quercus* sp. (oak), *Alnus glutinosa* (alder) or *Corylus avellana* (hazel) and *Ilex aquifolium* (holly). The elm from the latrine construction cut included some relatively fast grown wood, and some fragments exhibited insect damage, with small, round tunnels. The oak which dominated gully 21322 was in a poor condition, with frequent radial cracks and some vitrification.

Discussion

The types of contexts examined suggest that general domestic settlement waste is represented in the fills. The charcoal assemblages, therefore, represent mixed debris from firewood. The use of a mixed deciduous range of taxa is typical for domestic fires, as is the use of relatively small diameter roundwood, consistent with the gathering of fallen branchwood and/or hedgerow trimmings. Oak is well represented in all phases, and for the Iron Age and Romano-British periods there is a component of hedgerow/scrub type taxa such as blackthorn and hawthorn group. Alder favours damp ground, and there are several taxa which prefer open conditions and/or are good colonisers of open ground, such as ash, birch and both *Prunus* species.

The medieval and early post-medieval samples produced more limited assemblages, with oak dominating the sample from gully 21322, and elm and oak in latrine 21165. It is possible that these assemblages represent the remains from specific activities, or it may reflect a change in fuelwood selection or woodland availability. The presence of insect tunnels in the elm in the latrine's construction cut may suggest that the wood originally derived from a structure or artefact, as the round shape of the tunnels was characteristic of the Anobidae, wood-boring beetles that commonly inhabit dead wood such as furniture or timber buildings (Mark Robinson, pers. comm.).

Molluscan Remains

by Sarah F. Wyles

Mollusc preservation varied across the site but was generally relatively poor, particularly in Area 501. On the basis of assessment (Wessex Archaeology 2013b), 27 samples were selected for detailed molluscan analysis. These samples break down into a series of five samples from palaeochannel 20108/20153 in Area 500; one sample from late Romano-British ditch 32743 in Area E; and one sample from medieval ditch 21412 (dated to the 11th/12th century by pottery) and a series of 19 samples from ditch group 21166 (radiocarbon dated, see Wyles and Barclay, below) in Area 503.

Methodology

A total of 24 small samples of 290–2000 g, and two samples of 30 l, were processed for molluscs following standard methods (Evans 1972). The analytical methods employed were the identification of apical and diagnostic mollusc fragments >0.5 mm, following the nomenclature of Anderson (2005), and using a x10–x40 stereo-binocular microscope. The results are presented in Tables 4.5 and 4.6. Details of the ecological preferences of the species follow Evans (1972), Kerney (1999) and Davies (2008).

Results

Area 500
Palaeochannel 20108/20153

Context 20149, Sample 63, 0.44–0.49 – greyish brown clay, alluvium: The sample included a single shell of the open country species *Pupilla muscorum*.

Context 20127, Samples 62–61, 0.25–0.4 – brown clay loam, alluvium: The moderate assemblage recorded from sample 62 was dominated by *Pupilla muscorum*, again the only terrestrial species. *Pupilla muscorum* has been found very occasionally in marsh habitats (Boycott 1934, 18). The aquatic species were mainly the brackish water species. *Ecrobia ventrosa* 'inhabits water of low to moderate salinities in quiet estuaries, ponds behind shingle bars, and lagoons and drainage ditches in coastal marshes', while *Peringia ulvae* is 'restricted to brackish or salt water in estuaries, intertidal mudflats and salt marshes' and *Myosotella myosotis* 'is found in muddy sheltered places at high-tide level in brackish estuaries and salt marshes' (Kerney 1999). There was also a small freshwater element in the assemblage. A smaller assemblage of similar species was retrieved from sample 61.

Context 20129, Sample 60, 0.05–0.1 – brown clay loam, alluvium: A few shells of *Ecrobia ventrosa* and *Peringia ulvae* were present in this assemblage. These mollusc assemblages appear to be indicative of a well established open environment with increased levels of flooding by brackish water.

Table 4.5 Molluscs from palaeochannels and ditches in Areas 500, 503 and E

Area			500			E	503
Phase			M–LIA		RB	LRB	Med
Feature group			20153		20108		21412
Feature type			Palaeochannel		P'channel	Ditch	Ditch
Feature			20125		20135	32743	21398
Context	20149	20127		20129	20136	32751	21399
Series		59					
Sample	63	62	61	60	53	405	332
Depth (M)	0.44–0.49	0.35–0.4	0.25–0.3	0.05–0.1	spot	spot	spot
Weight (G)	1500	2000	1500	1500	1000	30 l	30l
Land Snails							
Succinea/Oxyloma spp.	–	–	–	–	–	2	5
Vertigo pygmaea (Draparnaud)	–	–	–	–	–	–	4
Vertigo spp.	–	–	–	–	1	1	2
Pupilla muscorum (Linnaeus)	1	48	2	–	–	–	6
Vallonia costata (Müller)	–	–	–	–	–	2	–
Vallonia pulchella/excentrica	–	–	–	–	–	5	25
Vallonia spp.	–	–	–	–	–	–	2
Dercoceras/Limax	–	–	–	–	–	–	2
Trochulus hispidus (Linnaeus)	–	–	–	–	–	1	–
Fresh and Brackish Water Snails							
Ecrobia ventrosa (Montagu)	–	2	–	–	14	70	115
Peringia ulvae (Pennant)	–	3	–	–	3	3	7
Peringia/Ecrobia spp.	–	5	5	2	385	83	90
Myosotella myosotis (Draparnaud)	–	2	–	–	–	–	21
Leucophytia bidentata (Montagu)	–	–	–	–	–	–	3
Galba truncatula (Müller)	–	–	–	–	–	15	9
Radix balthica (Linnaeus)	–	–	–	–	–	2	65
Lymnaea/Galba/Radix spp.	–	–	–	–	–	24	82
Planorbis planorbis (Linnaeus)	–	–	–	–	–	1	–
Anisus leucostoma (Millet)	–	–	–	–	–	–	1
Bathyomphalus contortus (Linnaeus)	–	1	–	–	–	–	–
Gyraulus crista (Linnaeus)	–	–	–	–	1	–	–
Planorbids	–	–	1	–	1	2	–
Taxa	1	5	3	1	4	10	12
Total	1	61	8	2	405	211	439
% Open country species	100	78.69	25	0	0.25	3.79	8.88
% Intermediate species	0	0	0	0	0	0.47	0.46
% Marsh species	0	0	0	0	0	0.95	1.14
% Amphibious species	0	0	0	0	0	7.11	2.28
% Intermediate species	0	1.64	0	0	0.25	0.95	14.81
% Ditch species	0	0	0	0	0	0.47	0
% Brackish water species	0	11.48	0	0	4.2	34.6	32.57
% Unassigned species	0	8.2	0	100	95.31	51.66	39.86

The large assemblage from the palaeochannel (20108) was dominated by the brackish water species, *Ecrobia ventrosa* and *Peringia ulvae*, with a single shell of a terrestrial species (*Vertigo* sp.) and a few shells of freshwater species. The freshwater species included *Gyraulus crista*. The assemblage may be reflective of a palaeochannel with brackish water inundation but with an occasional flowing fresh water element.

Area E

Ditch 32743

Ecrobia ventrosa and *Peringia ulvae* formed 74% of this moderately large assemblage and the freshwater element around 20%. The small number of terrestrial species may be indicative of long damp grassland in the immediate vicinity of the ditch, while the freshwater element also may be representative of marshy grassland and seasonal freshwater flooding together with the occasional brackish water inundation.

Area 503

Ditch 21412

The large assemblage was dominated by the brackish water species, with *Ecrobia ventrosa*, *Peringia ulvae*, *Myosotella myosotis* and *Leucophytia bidentata* forming 54% of the assemblage. *Leucophytia bidentata* is 'a semi-marine species, living typically on open shores,

Table 4.6 Molluscs from medieval ditch 21166

Area	Area 503																		
Feature group	Ditch 21127 Group 21166																		
Context		21134				21131				21130						21129			
Series	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305	305
Sample	308	308	308	307	307	307	307	307	309	309	309	309	306	306	306	306	306	306	306
Depth (M)	0.7–0.75	0.65–0.7	0.6–0.65	0.55–0.6	0.5–0.55	0.45–0.5	0.4–0.45	0.35–0.4	0.15–0.2	0.1–0.15	0.05–0.1	0–0.05	0.3–0.35	0.25–0.3	0.2–0.25	0.15–0.2	0.1–0.15	0.05–0.1	0–0.05
Weight (G)	870	610	1090	475	900	900	1000	1400	450	290	940	1090	710	1290	1000	1140	1380	900	1060
Land Snails																			
Succinea/Oxyloma spp.	–	–	–	–	–	–	–	–	–	2	1	–	–	–	–	–	–	–	–
Vertigo pygmaea (Draparnaud)	–	–	–	–	–	–	3	–	–	–	1	–	–	1	–	–	–	–	–
Vertigo spp.	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	2	–	–
Pupilla muscorum (Linnaeus)	–	–	-	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–
Vallonia costata (Müller)	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–
Vallonia pulchella/excentrica	–	–	–	–	1	–	–	–	–	–	–	2	–	1	2	1	2	–	1
Vallonia spp.	–	–	–	–	–	–	1	–	1	–	2	–	1	–	1	–	–	1	–
Vitrina pellucida (Müller)	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	1	–	–	–
Vitrea sp.	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	2
Aegopinella pura (Alder)	–	–	–	–	1	–	–	1	–	–	–	–	–	1	–	–	–	–	–
Aegopinella nitidula (Draparnaud)	–	–	–	1	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–
Dercoceras/Limax	–	1	–	2	2	3	–	–	–	–	1	1	–	2	1	4	2	2	5
Trochulus hispidus (Linnaeus)	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Fresh and Brackish Water Snails																			
Ecrobia ventrosa (Montagu)	–	–	–	–	–	1	1	–	–	–	–	2	3	–	–	–	3	–	1
Peringia ulvae (Pennant)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1
Peringia/Ecrobia spp.	1	–	–	–	3	2	1	2	–	1	–	–	2	–	2	–	2	1	–
Myosotella myosotis (Draparnaud)	–	–	–	–	–	–	1	–	–	–	–	–	–	2	–	1	1	1	–
Galba truncatula (Müller)	–	–	1	–	6	15	–	–	–	1	–	–	–	1	–	1	3	1	2
Radix balthica (Linnaeus)	–	–	2	2	10	18	1	–	3	–	–	–	–	–	–	–	–	–	–
Lymnaea/Galba/Radix spp.	–	1	1	–	68	63	–	–	–	–	–	1	–	–	–	–	2	1	–
Taxa	2	2	2	3	7	5	6	3	2	4	4	4	2	8	3	5	6	6	6
Total	2	2	4	5	92	103	9	4	4	5	6	6	6	11	6	8	17	8	12
% Open country species	0	0	0	0	2.17	0	44.4	25	25	20	66.7	33.3	16.7	18.2	50	12.5	23.53	25	8.33
% Intermediate species	50	50	0	40	2.17	2.91	0	0	0	0	16.7	16.7	0	36.4	16.67	62.5	11.76	25	41.7
% Shade – loving species	0	0	0	20	1.09	0.97	11.1	25	0	0	0	0	0	18.2	0	0	0	0	16.7
% Marsh species	0	0	0	0	0	0	0	0	0	40	16.7	0	0	0	0	0	0	0	0
% Amphibious species	0	0	25	0	6.52	14.6	0	0	0	20	0	0	0	9.09	0	12.5	17.65	12.5	16.7
% Intermediate species	0	0	50	40	10.9	17.5	11.1	0	75	0	0	0	0	0	0	0	0	0	0
% Brackish water species	0	0	0	0	0	0.97	22.2	0	0	0	0	33.3	50	18.2	0	12.5	23.53	12.5	16.7
% Unassigned species	50	50	25	0	77.2	63.1	11.1	50	0	20	0	16.7	33.3	0	33.33	0	23.53	25	0

around high-tide mark among shingle and the crevices of rocks. Less commonly it may be found in more sheltered situations in estuaries or in tidal lagoons' (Kerney 1999). The terrestrial and freshwater species may be reflective of long damp marshy grassland with seasonal freshwater flooding in the area of the ditch together with occasional brackish water inundations.

Ditch 21166

Context 21134, Sample 308, 0.60–0.75 – greyish brown clay to silty clay loam: The three small assemblages recorded from this context were a mixture of terrestrial, freshwater and brackish water species.

Context 21131, Sample 307, 0.35–0.60 – grey to greyish brown clay: Larger assemblages were recovered from two of the five samples from this context. These were dominated by the freshwater species *Galba truncatula* and *Radix balthica*. They may be indicative of long damp marshy grassland with seasonal freshwater flooding in the area of the ditch together with very occasional brackish water inundations

Context 21130, Sample 309, 0.0–0.20 – grey to greyish brown clay: The four small assemblages recorded from this context were again a mixture of terrestrial, freshwater and brackish water species.

Context 21129, Sample 306, 0.0–0.35 – grey to greyish brown clay: The seven small assemblages recorded from this context were also a mixture of terrestrial, freshwater and brackish water species. There were fluctuations between the levels of species but the numbers are too low to draw any firm conclusions.

Summary

The mollusc assemblages from the site appear to be reflective of a generally well established open environment with some areas of long marshy grassland and fluctuating levels of flooding by brackish and fresh water during the Middle/Late Iron Age to the medieval period. There is evidence for some element of brackish water inundation from the assemblages in Area 500 and Area E during the Middle/Late Iron Age and Romano-British period.

The pattern of settling on and exploiting open landscapes with fluctuating levels and areas of fresh water and brackish water has been recorded elsewhere along the edge of the Bristol Channel in the Avonmouth Levels during this period. A similar environment of fresh and brackish water inundations was observed in the assemblages from a Romano-British enclosure ditch cut into a marshy area at Plot 4000, Avonmouth (Wyles 2007). There was also evidence from mollusc, ostracod and diatom assemblages from Romano-British features at Farm Lane and Crook's Marsh along the Pucklechurch to Seabank pipeline, Avonmouth (Masser *et al.* 2005) of an open environment with fresh water elements and with episodes of saltwater flooding.

There were more differences between these assemblages from the Steart Point peninsula and those analysed as part of a study of the Romano-British exploitation of the coastal wetlands of the North Somerset Levels (Rippon 2000b). The mollusc assemblages from Romano-British contexts at Banwell, Kenn Moor and Puxton 'were overwhelmingly freshwater and suggestive of ditches with a range of environments', with only a significant brackish component in the upper fills of the Banwell ditches (Davies 2000, 169). There seems to have been a post-Roman inundation and the creation of a low saltmarsh/high mudflat environment at Banwell (Rippon 2000b).

Reclamation appears to have taken place in some areas of the North Somerset Levels during the late Romano-British period to improve agricultural productivity. There is, however, some evidence that some areas such as the Brue Valley were left as tidal marshes and were exploited for their natural resources; there seems to have been a decision to divide the landscape and use different areas in different ways (Rippon 2000b). Further land reclamation took place in this area during the early medieval period, possibly in a rather piecemeal way after a period of marine inundation. This land reclamation may have been part of the wider general trend of agricultural intensification during this period (Rippon 2000b).

Perhaps unsurprisingly, the landscape of the Steart peninsula, with fluctuating levels of inundations of fresh and brackish water, appears to be comparable with some areas of the changing landscapes on the Avonmouth Levels and North Somerset Levels during this period.

Pollen

by Michael J. Grant

Two post-medieval features were identified as suitable for palynological investigations – the construction cut for latrine 21165, and the phase 3 enclosure ditch 21048, both in Area 503. After an initial assessment of the pollen assemblages from the sediment fills, it was determined that the pollen assemblages were well preserved, diverse and contained sufficient pollen concentrations to warrant a full pollen analysis program of the two samples.

Methodology

Standard preparation procedures were used (Moore *et al.* 1991); 2 g of sediment was sampled from bulk samples <300> and <320>, with a *Lycopodium* spike added (batch 212761) to allow the calculation of pollen concentrations (Stockmarr 1971). All samples received the following treatment: 20 mls of 10% KOH (80°C for 30 minutes); 20 mls of 60% HF (80°C for 120 minutes); 15 mls of acetolysis mix (80°C for 3 minutes); stained in 0.2% aqueous solution of safranin and mounted in silicone oil following dehydration with tert-butyl alcohol.

Pollen counting was undertaken at a magnification of x400 using a Nikon SE transmitted light microscope. Determinable pollen and spore types were identified to the lowest possible taxonomic level with the aid of a reference collection kept at the University of Southampton. The pollen and spore types used are those defined by Bennett (1994; Bennett *et al.* 1994), with the exception of Poaceae which follow the classification given by Küster (1988), with plant nomenclature ordered according to Stace (1997). The pollen analysis results are drawn as a diagram (Fig. 4.1) using Tilia v 1.7.16 (Grimm 1991).

A total land pollen (TLP) sum of 400 TLP was adopted for analysis with the pollen assemblage calculated as %TLP. The TLP sum excludes aquatics and pteridophyes, which are calculated as % + Group.

Results

Latrine 21165

The sample investigated was taken from a 30 litre bulk sample from the fill of the construction cut for latrine 21165. The pollen assemblage is dominated by dwarf shrub and herb taxa, with few trees represented. The tree taxa present, including *Pinus sylvestris* (pine), *Quercus* (oak), *Betula* (birch) and *Alnus glutinosa* (alder), are likely to have been situated beyond the site itself, and their pollen distributed over extended distances by wind. The dwarf shrub/herb assemblage is dominated by Poaceae (grasses) with Chenopodiaceae (goosefoot) and Brassicaceae (cabbage family). These latter two may be related to local halophyte communities on the Steart peninsula, an interpretation also supported by the presence of *Plantago maritima* (sea plantain). *Glyceria*-type (sweet grasses) and *Arrhenatherum*-type (false-oat grasses) which may also be related to wetland communities, along with the presence of Cyperaceae (sedges), or local wild grass communities.

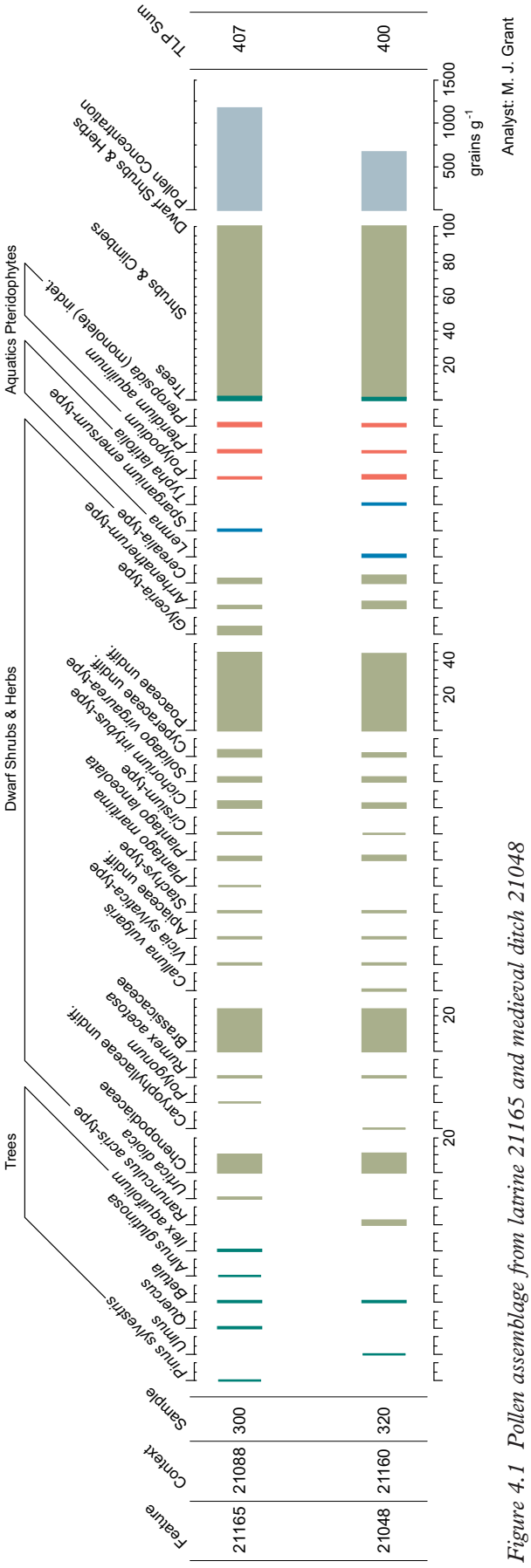

Figure 4.1 Pollen assemblage from latrine 21165 and medieval ditch 21048

In addition to the wild grasses, *Cerealia*-type was also present within the fill, indicating some arable activity. The presence of *Polygonum* (knotgrass) and *Vicia sylvatica*-type (vetches), which includes *Vicia faba* (broad bean), also supports the presence of arable activity. However, this pollen may be associated with the dumped processed cereal material within the construction cut fill and may not, therefore, necessarily indicate cereal cultivation immediately adjacent to the sample site.

Rumex acetosa (common sorrel) and *Plantago lanceolata* (ribwort plantain), coupled with the dominance of grassland communities and saltmarsh, and presence of *Pteridium aquilinum* (bracken), suggest local pastoral activities were taking place. There are additional indicators of local disturbance or waste ground, including *Cirsium*-type (thistles), *Cichorium intybus*-type (including dandelion and chicory) and *Solidago virgaurea*-type (daises/ goldenrods). Aquatic pollen types are poorly represented with only *Sparganium emersum*-type (bur-reeds) present.

Ditch 21048

The sample was taken from an 8 litre bulk sample from fill 21160 of ditch 21048. The pollen assemblage is dominated by dwarf shrub and herb taxa, with few trees represented. The tree taxa present, consisting of *Ulmus* (elm) and *Betula*, are likely to be situated beyond the study site and their pollen distributed over extended distances by wind. The dwarf shrub/herb assemblage is dominated by Poaceae with Chenopodiacaeae and Brassicaceae. These latter two may be related to local halophyte communities on the Steart peninsula. *Arrhenatherum*-type may also relate to wetland communities, along with the presence of Cyperaceae, or local wild grass communities.

In addition to the wild grasses, *Cerealia*-type was also present within the fill, indicating some arable activity, with *Vicia sylvatica*-type, also present and possibly supporting an interpretation of arable activity. However, this pollen may be associated with the dumped processed cereal material within the ditch and may not, therefore, necessarily indicate actual cereal cultivation immediately adjacent to the sample site. *Rumex acetosa* and *Plantago lanceolata*, coupled with the dominance of grassland communities and saltmarsh, and presence of *Pteridium aquilinum* (bracken), suggest local pastoral activities were taking place. Additional indications of local disturbance or waste ground include *Urtica dioica* (nettles), *Cirsium*-type, *Cichorium intybus*-type and *Solidago virgaurea*-type. The presence of *Calluna vulgaris* (heather) may indicate some small patches of coastal heath. Aquatic pollen types are poorly represented with only *Lemna* (duckweed) and *Typha latifolia* (bulrushes) present.

Conclusions

The two features investigated contained similar pollen assemblages, perhaps unsurprising as the two are assumed to have been contemporaneous. The local landscape appears to have been open grassland with a number of wetland and estuarine habitats present that would have been attractive for pastoral activities. Evidence of arable agriculture is also present but it is uncertain whether the cereal pollen encountered reflects local cultivation or simply relates to local processing activities, with cultivation taking place elsewhere in the area, possibly on higher and drier soils.

Geoarchaeology

by John Russell

In order to understand the sediment sequence across the site a programme of geoarchaeological assessment was undertaken. This comprised an assessment of previous geotechnical data (boreholes and test pits) and a programme of purposive boreholing to acquire core samples for geoarchaeological and palaeo-environmental work to include geoarchaeological description, Optically Stimulated Luminescence (OSL) dating, radiocarbon dating and assessment of macrofossils (waterlogged plants, molluscs, insects and charcoal) and microfossils (foraminifera, ostracods and pollen). Two borehole locations were drilled for geoarchaeological purposes: WA2011_BH02 and WA2011_BH05 (Fig. 1.1). The full methods and results are given within the site reports (Wessex Archaeology 2012a).

Methodology

Undisturbed 100 mm diameter U100 core samples were retrieved from specific depths at the two borehole locations using a shell and auger percussion drilling rig. The U100 samples were split longitudinally and sedimentary characteristics were recorded including texture, colour, stoniness, nature of boundaries and structure (*cf.* Hodgson 1976). Samples were sent to the OSL laboratory at University of Gloucester for dating.

Subsamples of 250 cm^3 were taken for macrofossil (waterlogged plants, molluscs, charcoal and insects) were processed by wet sieving through a 250 μm sieve. The samples were then visually inspected under a stereo-binocular microscope using x10 to x40 magnification and assessed. Suitable material was extracted for radiocarbon dating and sent to the Scottish Universities Environmental Research Centre in Glasgow. Smaller microfossil subsamples were taken for foraminifera and ostracods (50 cm^3) which

were processed by wet sieving through a 63µm sieve, dried and identified using a microscope under 10–60x magnification and transmitted and incident. Pollen samples (of 4 cm³) were processed using the methods outlined (see Grant, above).

Results

The results of the geoarchaeological and palaeoenvironmental work indicate that overlying Jurassic bedrock, an up to 12 m thick sequence of Pleistocene and Holocene deposits exist across the site. Borehole WA2011_BH02 (Fig. 4.2) is representative of the sedimentary sequence. At the base of the sequence, within Pleistocene clays and sands, an OSL sample returned a result of GL11023: 169 ± 31 ka (138,000 to 200,000 BP), equivalent to the Middle Palaeolithic period (Wessex Archaeology 2012a). Whilst the sediments at this depth were devoid of other palaeo-environmental remains, the date indicates that these sediments may be related to the formation known as the Burtle Beds which are not currently mapped in the area (Brown 1980).

Above this, the thick and widespread Holocene estuarine alluvial and peat deposits (which occur across the site between 10 m below and 5 m above Ordnance Datum) were separated by a *Phragmites* (common reed) peat deposit. The Holocene sediments are similar to those recorded by Haslett *et al.* (2000) in the Somerset Levels. The lower alluvial clays (from approximately 0.5 m above OD to 4 m below OD within borehole WA2011_BH02) contained molluscs, foraminifera and ostracods indicative of brackish, estuarine and saltmarsh environments with some freshwater input. A surrounding environment of *Quercus* (oak) and *Corylus avellana*-type (hazel) woodland with areas of more open ground was interpreted from the pollen assemblage. It is likely that these deposits are equivalent to the so called Middle Wentlooge formation (Allen and Rae 1987) and to the Marine Clay recorded within the Somerset levels (Coles and Coles 1986).

From the overlying peat, a horizontally bedded *Phragmites* stem taken at 0.75 m above OD, returned a result of SUERC-38608: 4020±35 BP (5050–4860 cal BP; 3100–2910 cal BC, full details of the dating can be found in Wessex Archaeology 2012a). The palaeoenvironmental remains recovered from the peat indicate that it formed within estuarine and marsh sediments within the tidal frame surrounded by areas of *Quercus* (oak) and *Corylus avellana*-type (hazel) woodland and grassy marshy open ground. The continual Holocene sea level rise is noted in the overlying estuarine alluvial deposits which contained foraminifera and ostracods indicative of brackish,

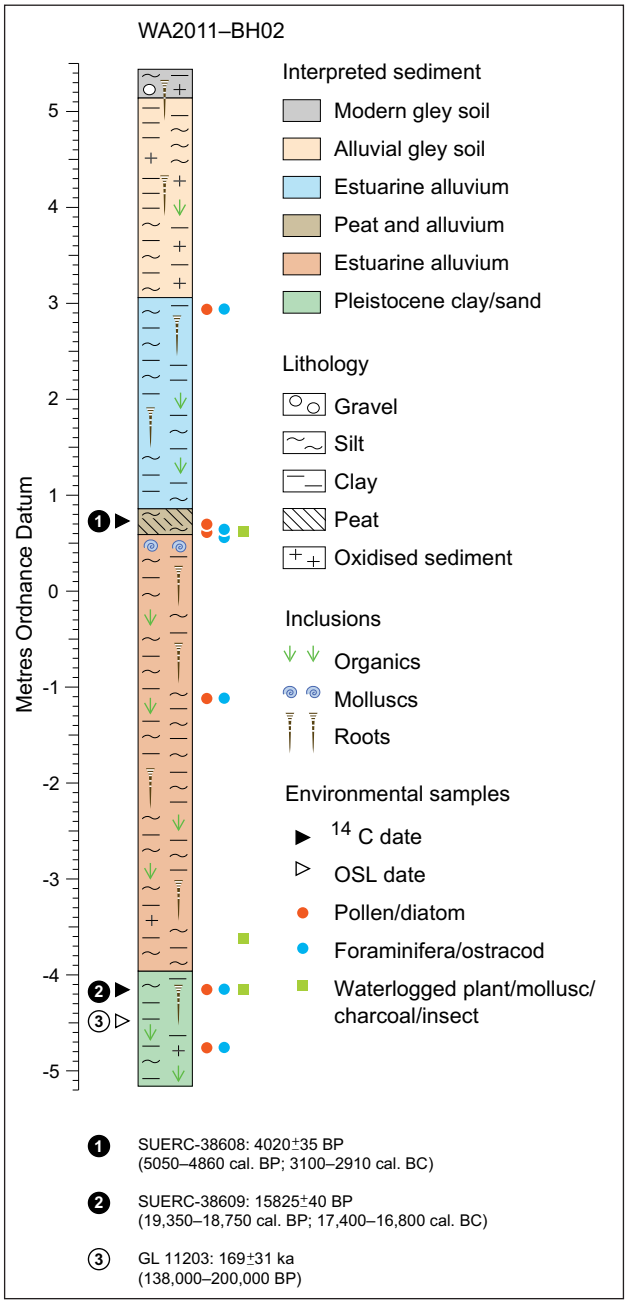

Figure 4.2 Borehole WA2011_BH02: sediments, scientific dating and palaeoenvironmental assessment samples

marsh and estuarine environments and likely equivalent to the so-called Upper Wentlooge as described by Allen and Rae (1987).

The uppermost alluvial gley soils (upon the surface of which the bulk of this present archaeological investigation was focused) have formed no doubt in part as a result of natural processes including a stabilisation of sea level in the later Holocene (Shennan *et al.* 2002) and land reclamation in the area. These sediments are equivalent to the (Roman) Wentlooge palaeosol as described by Allen and Rae (1987) which is thought to have formed as a result

Table 4.7 Radiocarbon measurements

Laboratory Code	*Context and sample*	*Radiocarbon age BP*	*$\delta^{13}C$ ‰*	*δ15N (‰)*	*C:N ratio*	*Calibrated date range (95% confidence)*
SUERC-42509	Animal bone, sheep metacarpal (20207), ON 47	1754±30	-21.0‰	7.9	3.3	230–390 cal AD
GU-34476	Animal bone sheep femur, stone spread 20213 (context 20295), ON 51	Failed	–	–	–	–
GU-34477	Charred plant remains, *Triticum spelta* glume bases x 10, gully 20729 (context 20299) <125>	Failed	–	–	–	–
SUERC-42511	Charred plant remains, *Triticum spelta* glume bases x 10, ditch 20262 (context 20244) <102>	1793±30	-23.4‰	–	–	130–340 cal AD
SUERC-42512	Charred plant remains, *Triticum turgidum/aestivum* type grain x 5, ditch 21166 (context 21134) <302>	911±30	-21.7‰	–	–	1020–1220 cal AD
SUERC-42513	Charred plant remains, *Triticum turgidum/aestivum* type grain x 5, gully 21322 (context 21284) <311>	956±30	-22.0‰	–	–	1010–1160 cal AD

of land drainage facilitated by a system of deep drainage ditches during the Romano-British period (Bell 2000).

Conclusions

The geoarchaeological interpretation of the sequence has uncovered previously unrecorded Pleistocene sediments underlying a sequence of Holocene deposits within the Parrett Valley, similar to those recorded in the Somerset Levels (Haslett *et al.* 2000) and the wider Bristol Chanel area (Allen and Rae 1987). Of particular interest is the Neolithic *Phragmites* peat which is recorded across the site at around the level of Ordnance Datum and buried 5 m below the present ground level. During the Neolithic period, the rapid rate of Holocene sea level rise began to slow (Shennan *et al.* 2002). It is this natural process, noted around the southern coast of Britain, that has led to the widespread development of peat deposits of this date (Haslett *et al.* 2000). The elevation and composition of the peat is similar to the *Phragmites* peat containing the Sweet Track across the Glastonbury Levels (Coles and Coles 1986) and as such, further archaeological examination of these deeper sediments may prove fruitful.

Radiocarbon Dating

by Sarah F. Wyles and Alistair J. Barclay

Six samples were submitted to the Scottish Universities Environmental Research Centre (SUERC) (Table 4.7: two samples failed). The dates have been calculated using the calibration curve of Reimer *et al.* (2013) and the computer program OxCal (v4.2.3) (Bronk Ramsey and Lee 2013) and cited in the text at 95% confidence and quoted in the form recommended by Mook (1986), with the end points rounded outwards to 10 years. The ranges in plain type in the radiocarbon tables have been calculated according to the maximum intercept method (Stuiver and Reimer 1986). All other ranges are derived from the probability method (Stuiver and Reimer 1993).

The aim of the radiocarbon dating programme was to determine the age of a series of deposits assumed to be of Romano-British and medieval date, respectively, and to clarify the site chronology (Table 4.7). Both pairs of dates (SUERC-42509/42511 and SUERC-42512/42513) are statistically consistent, which could suggest that the samples belong to similar phases of activity in the mid- to late Romano-British period and the start of the medieval period, respectively.

Chapter 5
Discussion

by Lorrain Higbee, Lorraine Mepham and Christopher Phillpotts†

Middle–Late Iron Age

Introduction: Changing Environments

The early prehistoric landscape of the Severn Estuary lies buried beneath a deep sequence of marine sediments and organic peat deposits lain down during the Holocene. The sequence of deposits, known as the Wentlooge Formation, reflects fluctuations in climate and sea level, with marine sediments deposited at times of high sea level and peat or saltmarsh developing during periods of low sea level (Allen and Rae 1987; Crowther and Dickson 2008, 11; Haslett *et al.* 2000, 49; Heyworth and Kidson 1982; McDonnell 1994, 108; Ritchie *et al.* 2007; Straker 2000, 64; Wilkinson and Straker 2008, 63–4). A sequence of peat formation and alternating mineral sediments of silts and clays has been identified at Porlock to the west of the peninsula (Canti *et al.* 1995; Jennings *et al.* 1998; Straker *et al.* 2004). Further peat deposits have been identified at Stolford, Wick Rocks (McDonnell 1994, 108), Burnham-on-Sea (Druce 1999) and various other locations in the Severn Estuary (Mullin *et al.* 2009), as well as on the Welsh side of the Estuary at Goldcliff, Gwent (Bell 1994). Neolithic peat deposits, radiocarbon dated to 3100–2910 BC (4020±35 BP, SUERC-38608) and 2630–2460 BC (4390±30 BP, SUERC-38610), have also been recorded in two boreholes on the peninsula (see Russell, Chapter 4; Wessex Archaeology 2011d; 2012a).

The most significant rise in sea level took place by *c.* 5000 BC, but later changes also had an impact on the coastal lowlands of the Estuary. Evidence for the onset of wetter conditions during the Late Bronze Age and Early Iron Age has been identified from detailed palaeoenvironmental studies at various locations in the Central Somerset Levels (Straker *et al.* 2008, 108–9). Perhaps the most significant findings to emerge in recent years come from Glastonbury Lake Village. Microfossils indicate that the settlement had access to the coast via a partially estuarine channel to the north of the village that was created by marine incursion in the Early to Middle Iron Age and remained open in the Late Iron Age (Aalbersberg and Brown 2011). A large, buried tidal channel known as the *Siger* (Brunning and Farr-Cox 2005) has also been identified crossing the Brue Valley just to the south of Brent Knoll. The channel probably developed in the Late Iron Age or early Romano-British period and appears to have gone out of use in the early medieval period. The dendritic pattern of the creeks that once fed into the *Siger* extended between the Seven Estuary and Burtle creating an extensive area of saltmarsh.

Ephemeral buried ground surfaces have been identified within the upper part of the Wentlooge Formation at several locations around the Estuary (Rippon 2000a, 86; 2000b, 106; Locock *et al.* 1998), including a Middle–Late Iron Age deposit at Hill Farm, Goldcliff, in the Caldicot Levels (Locock and Walker 1998). These deposits have been interpreted as stabilisation layers and generally contain cultural material such as pottery, animal bones, charred plant remains and charcoal. The descriptions of these layers sound very similar to the spreads from Area 500 and Trench 168.

Prior to the construction of embankments to protect the coastal lowlands of the Severn Estuary it is unlikely that the area was settled, but the rich resources they offered were probably exploited on a seasonal basis. Local topography must have been a significant factor in determining which areas were exploited, and the locations of rivers and creeks are also likely to have had some influence on the movement of people and goods in and out of the area. This rationale certainly seems to fit the evidence from Steart peninsula where seasonal activity in the salt marshes was focused along the tidal creek system while more formal management of the landscape in the form of ditched enclosures was concentrated on the upper, drier margins of the saltmarsh to the south-west.

Settlement Patterns

The Iron Age settlement pattern on both sides of the Severn Estuary shows a cluster of sites along the edges of the wetlands that flank the Estuary, with large, permanent settlements on the high ground and smaller sites on the lowlands (Sylvester 2004, 9). This pattern was established during the Middle Iron Age when conditions were slightly drier and more stable (Straker *et al.* 2008, 108; Locock and Walker 1998, 42; Allen 2005, 17), thereby allowing the expansion into lowland areas.

Figure 5.1 Iron Age and Roman sites mentioned in text

The local settlement pattern reflects these general trends (Fig. 5.1). On the higher ground to the south and west of the peninsula is Cannington hillfort (Rahtz 1969) and the extensive settlement evidence recently identified at Hinkley (S. Membery pers. comm.), while to the north-east are Brent Knoll and Brean Down hillforts (Bell 1990). Sites in the lowlands include Alstone and Kenn, both on 'islands' in the coastal marshes (Minnitt 2000, 73), Huntworth on the floodplain of the River Parrett (Powell *et al.* 2006), and Glastonbury and Mere lake villages on the peat fen. There is, however, relatively limited evidence for Iron Age occupation on the alluvial clay of the coastal lowlands (Rippon 1997, 56–7). On the Welsh side of the Estuary three sites have been identified in the intertidal zone of the Caldicot Levels, at Goldcliff, Redwick and Magor Pill (Rippon 1997, 57–8). The site at Goldcliff included timber structures and trackways built within a freshwater peatland environment but subject to periodic flooding (Bell 1991; 1992; 1993; 1994; Parkhouse 1990). A further four sites are known on the English side of the Estuary, at Badgworth and Lympsham, to the east and north of Brent Knoll hillfort respectively, Crannel Farm near Godney and at Hallen in the Avon Levels.

Evidence recovered from Badgworth (Leech 1977) indicates that it was a salt-production site, while the other three all appear to have been settlements. The site at Lympsham produced evidence of Middle–Late Iron Age occupation, including Glastonbury-style pottery and fragments of daub with wattle impressions, suggesting a timber structure of some kind (Broomhead 1991; Rippon 1997, 56–7). The site at Crannel Farm was discovered during the late 19th century and briefly investigated by Arthur Bulleid who identified a substantial linear wooden structure, similar in construction to the causeway at Glastonbury Lake Village. The causeway was associated with possible house structures in an adjacent field (Minnitt 2000, 73). The site at Hallen (Gardiner *et al.* 2002) comprised two post-built roundhouses with cobbled entranceways, set within small enclosures located on slightly raised areas (or 'islands') adjacent to a small channel. The site clearly flooded on a regular basis as indicated by the frequent number of times that features had been recut after becoming clogged with alluvium-rich floodwaters. Similar evidence for flooding was recorded at Northwick, where part of an Iron Age and Romano-British field system was investigated (Gardiner *et al.* 2002, 10–13). The settlement and field system appear to have been located to take advantage of 'dryland' pastures that were only accessible for a short period during the summer months (*ibid.*, 10, 27–31), and the two structures were probably only used for one or two generations before being abandoned due to flooding.

Life on the Edge

Evidence for Iron Age occupation on the peninsula is restricted to the landward (ie, south-west) end and included several thin charcoal-rich spreads that contained Middle–Late Iron Age pottery, animal bone, fired clay and burnt flint, and a few linear features. The pottery assemblage comprised rounded, high-shouldered vessels, mostly jars, plain vessels, thin walled burnished jars and bowls, and a few decorated vessels including one example of Glastonbury-style ware. Bead rim vessels were present in the pottery assemblage recovered from linear features in Area E, but absent from the spreads in Area 500, suggesting perhaps that the spreads pre-dated any attempt to divide and drain the land.

The charred plant assemblage from the spreads includes crop-processing waste from hulled emmer wheat and barley. There is also some indication that local hedgerow or scrub environment were foraged for hazelnuts and sloes. The environmental evidence indicates a landscape of mainly open grassland with patches of open woodland and a number of wetland and estuarine habitats, subject to flooding. Sheep and cattle were grazed on the lush grassland, and some pigs and horses were also kept.

Overall the evidence, although limited, seems to indicate domestic settlement and farming activity on the landward end of the peninsula during the Middle–Late Iron Age period, but with the exception of three undated postholes there was no indication of any house structures or drainage ditches directly associated with the spreads in Area 500. Indeed, the only evidence for more formal management of the landscape in terms of drainage and division comes from Area E, some 1.5 km to the south-west, where several slightly later ditches and gullies were identified. The nature of the spreads suggests that they formed during a brief period of drier conditions, and in this regard they can be viewed as similar to the stabilisation layers identified elsewhere in the Estuary (Rippon 2000a, 86; 2000b, 106; Locock *et al.* 1998; Locock and Walker 1998).

Given the rather ephemeral nature of the evidence and the inevitable character of the environment, it seems likely that any occupation of the peninsula at this time was on a temporary or seasonal basis, most probably by communities living on the drier margins of the coastal lowlands, at the peat-clay interface. The rich resources of the area would have provided pasture for grazing livestock, fertile land for arable cultivation and the opportunity for wildfowling and

foraging. Salt-production might also have been undertaken, although there is no evidence that this was the case.

Romano-British

Introduction: Reclamation

At the end of the Iron Age, the coastal lowlands around the Severn Estuary appear to have consisted largely of saltmarsh and mudflats, covered by a dendritic network of meandering creeks and channels and susceptible to periodic episodes of flooding (Rippon 1997, 63; Brunning and Farr-Cox 2005). Land reclamation, probably by wealthy villa estates, began in the late 1st century AD (Rippon 1997, 110; 2000a, 91), and was intended to improve agricultural productivity by expanding into marginal lands that were still prone to flooding. Rippon (2005, 159) has suggested that the major transformation process began during the 3rd century AD when embankments were constructed along parts of the coast and the major tidal rivers. Based on the pattern of Romano-British settlement in the coastal lowlands it has been postulated that three areas were protected from sea flooding and/or drained: Brent Marsh to the south of Mendip, the North Somerset Levels, and the upper Axe Valley to the south of Cheddar (Leech and Leach 1982, 69; Rippon 2000b, 69–70; 2008, 90–1). By contrast, the low density of settlements and high density of salterns in the Brue Valley has been taken as an indication that there was a deliberate policy to maintain the areas as tidal saltmarsh (Rippon 2000a, 86–9; 2000b, 71; 2008, 90). However, extensive areas of saltmarsh provide their own natural defence against coastal flooding and formal sea-defences are unlikely to have been necessary (Brunning and Farr-Cox 2005, 13–14). Evidence from around the Estuary indicates that many of the sites located in the coastal lowlands were abandoned in the late 4th century AD, possibly due to a declining economy or increased flooding, and later sealed by a thick layer of post-Roman alluvium; they were not reclaimed and resettled until the 11th century (Rippon 2000b, 195; 2005, 160).

Settlement, Industry and Trade

Permanent settlements developed on the areas of reclaimed land between the Rivers Axe and *Siger*, in the North Somerset Levels (Rippon 1997, 77; 2008, 90–1), and in the coast lowlands around the fringes of the saltmarsh. Perhaps the most significant sites between the Axe and *Siger* are those identified along the route of the M5 motorway by Sam Nash, including the remains of a substantial stone building thought to be a villa at Lakehouse Farm (Rippon 1997, 74; 2000b, 86–8; 2008, 90). Spreads of occupation debris and buried soils were noted at several other locations along the motorway, including at York Farm, Edington (Rippon 1997, 75), and at four separate locations along the route of a pipeline between Lympsham and Brent Knoll (Broomhead 1991). The evidence from this area indicates that the landscape had been protected from marine incursions, most probably by embankments along the Axe and *Siger*. At Rooksbridge (Russett 1989), a spread of late Romano-British pottery, daub and animal bone was recorded in association with several well built stone walls and a cobbled surface. Romano-British material has also been found at Batch in Lympsham, on the small bedrock island at Mark, near Brent Knoll and at Bleak Bridge in West Huntspill (Rippon 1997, 75; Powell forthcoming; Brunning 2013b).

The North Somerset Levels have been the subject of an extensive programme of field survey and excavation backed up with multi-disciplinary palaeoenvironmental analysis (Rippon 2000b). Unlike other areas of the Somerset Levels, the Romano-British ground surface lay within the plough-zone, not buried beneath a thick layer of post-Roman alluvium, making it far easier to map 'relict landscapes' that could be targeted by excavation (*ibid.*, 71). Three Romano-British settlement sites were targeted. The most extensive investigations were carried out on Banwell and Kenn Moor, with limited investigation of a third site at Puxton. The evidence indicated that these were low status settlements primarily engaged in farming and, in the case of Banwell, salt-production. It was initially assumed that reclamation of the North Somerset Levels was undertaken by one or more villa estates, of which there is a high density on the fen-edge within the Estuary (Rippon 1997, 115). Local examples include Locking, Banwell, Congresbury and Wraxall, and the centrally located villa at Wemberham. Rippon concluded, however, that in the North Somerset Levels '*the enclosure of the recently embanked marshland was a piecemeal process undertaken by individual farming communities, rather than a coordinated attempt at drainage on the part of some central authority*' (*ibid.*, 194–5). Occupation at these sites was short-lived and they were abandoned well before the end of Romano-British period.

Three main zones of activity can be distinguished in the area between the *Siger* and the Polden Hills and these are largely connected with salt-production, for which there is extensive evidence within the Brue Valley. Evidence for this industry stretches from the

coastal lowlands of the Estuary along the Brue Valley to the fen-edge, and is concentrated on a series of small bedrock and gravel islands between the River Brue and Parrett at Huntspill and Pawlett, a slightly raised area of alluvium north of the Brue around Highbridge, and along the peat-clay interface near Burtle (Rippon 1997, 65–72; 2008, 90–2; Grove and Brunning 1998; Brunning and Farr-Cox 2005, 14). It has been suggested that the industry began in coastal areas, possibly during the Iron Age, and expanded inland during the 3rd century AD (Rippon 1997, 70; 2008, 92); however, there is little evidence that this was the case. Indeed, salt-production in Somerset appears to have been a fairly late enterprise that grew rapidly into a large-scale industry (R. Brunning pers. comm.).

Rippon (2008, 92) estimates that there were probably between 500 and 1000 production sites (or salterns) in the area. In places the salterns survive as earthworks, locally referred to as 'briquetage mounds', and are generally found in association with large settling tanks for the brackish water. In areas where the production sites lay directly on the surface of the saltmarsh, as for example at Highbridge, roughly cobbled surfaces have also been found.

Based on present evidence it would seem that the coastal lowlands in the Brue Valley were the focus for an extensive salt-production industry throughout much of the late Romano-British period. The saltmarsh provided flood protection to communities living on the bedrock and gravel islands on the edge of the marsh. These locations would have provided access to a range of environments (upland/dryland and lowland/wetland) and resources, and access to vital communication routes such as rivers and roads (Rippon 1997, 77–8; Bell 2000, 90–1). Indeed, most goods coming into and out of the area by sea were probably traded along the River Parrett through the ports at Combwich and Crandon Bridge, and possibly even Ilchester, the last two locations also being linked by a road along the Polden Hills which eventually joined the Fosse Way (Rippon 1997, 53; 2008, 92).

Permanent Residence or Seasonal Occupation?

Following the summer forays on to the Steart peninsula during the Middle–Late Iron Age period there seems to have been a hiatus in activity until at least the middle/late 2nd–early 3rd century AD. The nature of this occupation is unclear and based entirely on residual finds of pottery, including a few sherds of samian. It is not until the late 3rd and 4th centuries AD that there is any significant evidence for occupation. The main evidence for Romano-British occupation came from the central part of the peninsula (Area 501) in which were revealed a series of drainage features associated with spreads of stone rubble. These features were located on a slightly raised area of alluvium between two palaeochannels. Flooding was clearly an issue as indicated by the number of times that the ditches and gullies had been recut. Indeed, one of these flooding episodes deposited a layer of alluvium over the site, which sealed a thin occupation layer that had accumulated since the previous deluge.

The general character of the finds assemblage is domestic in nature; however, despite this there was no indication of any house structures on the site. The stone rubble spreads had the appearance of roughly lain cobbled surfaces rather than demolition rubble, and were probably laid to consolidate the sodden ground in and around the settlement. The finds include pottery, animal bone, fired clay, coins, brooches and stone objects, including a weight, two whetstones and part of a shale armlet. Most of the pottery is broadly dated to the late 3rd to 4th century AD, although some such as the south-east Dorset orange wiped ware can be more closely dated to *c.* 375–400 AD and possibly into the 5th century AD. The assemblage is mostly utilitarian coarsewares associated with food preparation and storage, but also includes a few imported finewares. It can generally be placed in the Polden Ridge corridor distribution zone identified by Allen and Fulford (1996, 243)

A small amount of salt-working briquetage was also recovered from the site, although it is impossible to say whether this represents actual salt-working debris, or merely the remains of container vessels; it is also impossible to date more closely within the period. Arable and pastoral farming were also important activities. The disarticulated piece of human skull and neonatal burial from the stone spreads suggests that people had more than just a casual relationship with the peninsula – they were prepared to bury their dead there.

Evidence from Area 500 and E includes a series of drainage gullies and ditches, defining a further area of land division and drainage, albeit on the slightly drier fringes adjacent to the high ground at the landward end of the peninsula.

The landscape of the peninsula during the late Romano-British period included some areas of open woodland populated by ash and birch, interspersed with areas of shallow freshwater or ungrazed marshy grassland that were prone to brackish and freshwater flooding episodes. Overall the evidence suggests that the central area of the peninsula was permanently settled during the late 3rd to 4th century AD, although clearly seasonal flood events are likely to have led to the site being abandoned on a temporary basis before they were abandoned once and for all.

Head for the Hills

Many low-lying sites in the Severn Estuary were abandoned during the late 4th century AD due to a combination of tidal flooding and economic decline (Rippon 1997, 12–17; 2000b, 195; 2005, 160), and it is assumed that settlement on the peninsula was also affected. The flooding in the Estuary deposited a thick layer of alluvium over the area, the extent of which is marked by the limit of upstanding briquetage mounds in the Central Somerset Levels and relict field systems in other areas. Settlement activity retreated to the fen-edge, while sites on higher ground, such as at Combwich, continued as normal; indeed, it is not until the 11th century that the coastal marshes were extensively re-settled (Rippon 2000b).

Post-Roman

Introduction: Continuity Versus Desertion

There is no archaeological evidence from the peninsula for any activity between the abandonment of the late Romano-British settlement in Area 501 and the occupation of the medieval settlements in Areas 502 and 503. This conforms to the generally accepted view, based on recent palaeoenvironmental and archaeological survey combined with documentary research, that all the coastal wetlands around the Severn Estuary were subject to a period of post-Roman inundation, reflected in Romano-British period ground levels becoming sealed beneath approximately 0.70 m of alluvium, and that the coastal marshes were extensively reoccupied by the late 11th century (evidence from *Domesday*), probably in areas protected by sea walls (Rippon 1997, 126; 2000a, 88–9). Whether the general abandonment of the Somerset Levels wetlands is due to flooding alone, or in conjunction with other social or economic factors, is uncertain. But how real is this post-Roman hiatus? The absence of pottery of 5th to 9th century date in Somerset, and the scarcity of readily identifiable 10th-century pottery, generally means that it is difficult to prove, or to disprove, continuity of occupation between the Romano-British and early medieval periods. Although the low-lying marshes of the Steart Point peninsula would have been particularly vulnerable to tidal flooding, evidence from Combwich, a possible Roman port, suggests some continuity of settlement at least into the immediate post-Roman period, although whether this can be extended in a continuous sequence to the time of *Domesday*, as suggested (Leech and Leach 1982, 72), is uncertain. The large cemetery at Cannington (about 500 excavated graves) appears to have been used between the 4th and 8th centuries (Rahtz *et al.* 2000). Another early Anglo-Saxon cemetery is known nearby at Wembdon (Eagles 1994, 20). It does appear, therefore, that some areas of the Levels may have been less affected than others. Rippon tends to the opinion that while evidence for settlement continuity from Roman to medieval is not strong, yet widespread desertion cannot be proven (Rippon 1997, 131).

There is certainly some coincidence in the location of Romano-British and medieval features in the excavated areas (for example, in Area 500), but not in the major foci of activity: Areas 501, 502 and 503. The archaeological evidence from the peninsula therefore adds little to the continuing debate over continuity versus desertion, although two items of documentary evidence do suggest that the coastal lands on both sides of the River Parrett were settled and organised for agriculture in the 8th and 9th centuries. The first of these is a grant made in 794 to Glastonbury Abbey of 10 hides of land at *Eswirht* or *Ineswyrth* (the identity of the place is uncertain) next to Huntspill (Sawyer 1968, 459, no. 1692), while the second is a will made by King Alfred of Wessex in *c.* 873–88, in which his bequests of land include one at Cannington (*ibid.*, 422, no. 1507). Certainly the Parrett Estuary and immediately adjacent coastline was being exploited for fishing by the 9th century, from the evidence of dated fish weirs (see below).

Medieval Origins

Steart, Pawlett, Bridgwater, Stockland and Stogursey (Fig. 5.2) are all recorded as settlements in *Domesday*, and have their origins in the Saxon period (although the main part of the village of Stockland is clearly a planned settlement of the 12th century or earlier). *Domesday* also provides some idea of the density of settlement: the Lower Quantocks and Parrett Estuary were areas of very small holdings and low numbers of tenants per manor, but also have the highest number of tenants per hide (a unit of tax assessment, and not necessarily a fixed area), suggesting a fairly dispersed settlement pattern (Rippon 1997, 155). The recording of ploughlands in *Domesday* does, of course, imply that the land which had experienced flooding in the late Romano-British period had been recolonised, or at least 'rehabilitated' by this point, resulting in land suitable for arable cultivation (*ibid.*, 176–7). In 1086 there was land at Stockland for five ploughteams; there were 50 acres of meadow and 80 acres of pasture, and six cattle, 20 pigs, and 40 sheep were recorded. The record for Otterhampton is very similar, including six ploughteams, five cattle, 11 pigs and 45 sheep; wood and underwood was recorded as well as meadow and pasture (*VCH* 1992, 107–8, 127).

Figure 5.2 Medieval and post-medieval places mentioned in text

In both Area 502 and Area 503, the earliest features were associated with pottery of 11th- or 12th-century date, and it seems that these settlements at least were part of the reoccupation of the coastal marshes in the late Saxon or immediate post-conquest period, appearing just before or just after *Domesday*. The difficulties of dating pottery at this period have been discussed, and the only independent dating evidence (two radiocarbon dates: see Chapter 4) supports an 11th-/12th-century date for the establishment of the earliest enclosure in Area 503. Both settlements comprised small enclosures surrounded by 'moats', although these should probably be considered as drainage ditches rather than the at least partly defensive moats in the strictest sense of the word. These are two of the 14 'moated' sites identified across the peninsula from LiDAR images, all set within the enclosed fields (Wessex Archaeology 2009, figs 7 and 9; Fig. 1.2, B). Apart from Areas 502 and 503, two other 'moated' sites investigated (SHER 2034 and 2036) were associated with 11th–13th-century pottery, but none of the other

sites are as yet dated, and it is impossible to determine how many were in contemporaneous use.

The precise nature of the occupation of these 'moated' sites is not entirely clear although, unlike the Romano-British site in Area 501, there are some traces, albeit limited, of structures (postholes in Area 503); the excavated area at Area 502 just clipped the edge of the enclosed area, so the evidence here is limited. From a relatively early period (12th century), these small, isolated settlements were being supplied with pottery from the Bristol area, presumably through local markets such as Bridgwater, although the majority of the material culture is likely to have derived from the more local hinterland.

Coastal Resources

Evidence for exploitation of the coastal resources can be seen in the number of fish weirs recorded along the coast, and these were evidently in place from an early period. Wooden fish traps in Bridgwater Bay have produced dendrochronological dates in the 10th century, and radiocarbon dates beginning in the 9th century; later V-shaped groups of wooden posts were dated between the 15th and 17th centuries (Brunning 2008; Catchpole *et al.* 2014, 73, table 1). The weirs generally appear to be the type used with putts or putchers (funnel-shaped wicker fish traps) or by nets stretched over frames, known as 'hangs' or 'netsails' (Chadwick and Catchpole 2010, 50–3, figs 3–5, figs 35–8, table 3). There are numerous stake-built fish weirs along the River Parrett, and to the west and north-west of Steart Island (Brunning 2008; Chadwick and Catchpole 2010, 63; Crowther and Dickson 2008, fig. 5.27; McDonnell 1994). They have a variety of shapes, from linear to U-shaped, and the majority were aligned to trap or catch fish on the ebbing tide. Some of the fish weirs show signs of repair, indicating periods of rebuilding and reuse, and overall the evidence suggests the continuous use of fish weirs in this area over a millennium. An unusually large wooden post and stone V-shaped fish weir in the Gutterway (a wide channel between Steart Island and Steart Point) included posts made of non-native larch and spruce, introduced into Britain in the post-medieval period, although similar composite weirs in stone and wood were being created by the 11th century (Catchpole *et al.* 2014, 74, 81, table 1).

In the post-medieval period there are also a number of oyster beds – numerous oyster beds recorded on the banks of the River Parrett are visible as earthworks in aerial photographs. It is apparent, however, that oysters were exploited prior to this period, and presumably from local sources, since oyster shells were found in very small quantities on the Romano-British and medieval sites (Areas 501 and 502) as well as the post-medieval site in Area 503. Other resources from the sea included seaweed, which was collected and burnt by licence from the later 15th century, and which was gathered in great quantities in the 18th century (*VCH* 1992).

Drainage, Reclamation and Sea Defences

It is probable that marshlands on the peninsula were drained for agriculture by embankments and ditches in the pre-conquest period by the inhabitants of settlements at Stogursey and Stockland. These reclamations proceeded in a north-eastward direction from the uplands of these settlements along the spine of the shingle bar extending to Steart Island. They may have been accomplished by the two settlements separately, but the logic of the parish and field boundaries suggests that they acted in concert in two or three large-scale land engineering episodes, then divided the blocks of land they had gained between them. These initial pushes into the marshes brought them to the embankment and boundary now represented by Stert Drove. All this appears to have been accomplished before the formation of parish boundaries in the late 11th or early 12th centuries (probably emerging from a series of estate churches). However, the interdigitation of small parts of five parishes across the peninsula (Fig. 5.3) suggests that the marsh areas which these comprise were not reclaimed until after the main bodies of the parishes had been formed. The patterns of the parish and field boundaries suggest a series of lines of embankments representing progressive stages of reclamation moving to the south-east into the estuary of the Parrett (Fig. 5.4). At each stage the land gained was shared between the participating parishes. Stockland and Otterhampton shared the initial advances beyond the line of Stert Drove, with the people of Cannington participating much more fully (or even exclusively) in the later stages. At each stage green lanes or funnels were retained from the drove road or the older reclaimed fields to lead into the new lands. The parent manors and sub-manors also acquired interlocking pieces of land and common grazing rights in the new lands as the reclamation frontier advanced in a sequence of rapid steps. It is impossible to date these steps with any precision, but the dating of the sites at Areas 502 and 503, both within one of the outermost reclamation areas, suggests that this sequence of reclamation, too, was almost complete by the 11th or 12th century.

It is evident that the Steart peninsula was protected from the surrounding waters by embankments and drained by ditches. These ditches

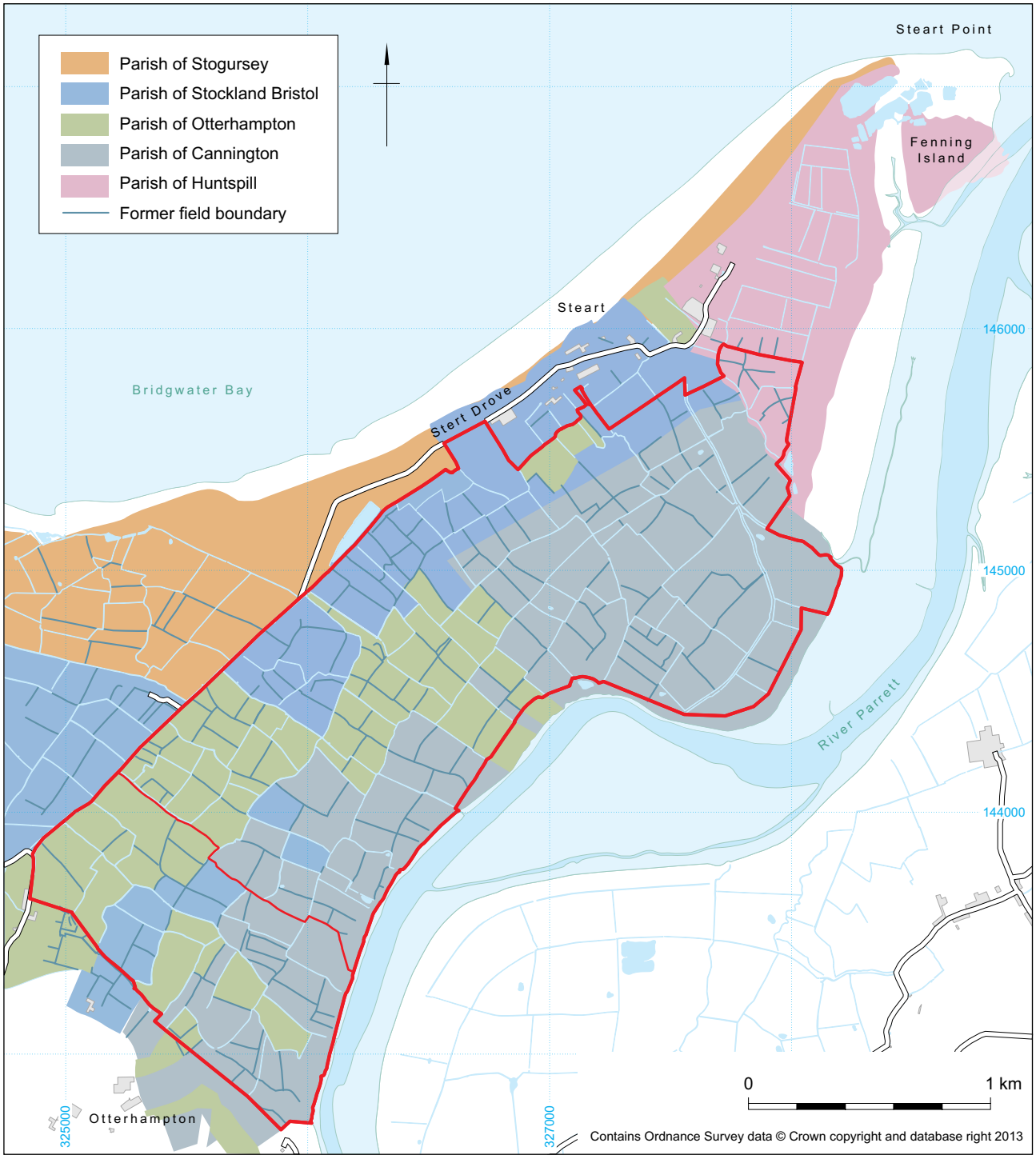

Figure 5.3 Medieval parishes on the Steart peninsula

drained into the River Parrett at low tide through a series of sluices. In 1296/7, 60 days' work was done in the manor of Stogursey to repair breaches in the sea dykes; 560 men were hired to fill these breaches (TNA: PRO, SC 1090/4 m14). In 1404/5 a royal enquiry into the state of the sea defences on both sides of the Parrett Estuary mentioned amongst other features a watercourse which ran from Cock through *Hyhurne* to the sea between the manors of Wick and Stockland (the North Brook), and which at that time flowed out to the sea through a sluice called *Thete* (at the west end of Wall Common). Each manor was accustomed to clean and bank its side of the watercourse (Ross 1959, 133–5, no. 195).

The maintenance of the sea defences and drainage ditches continued to be a concern of the manorial

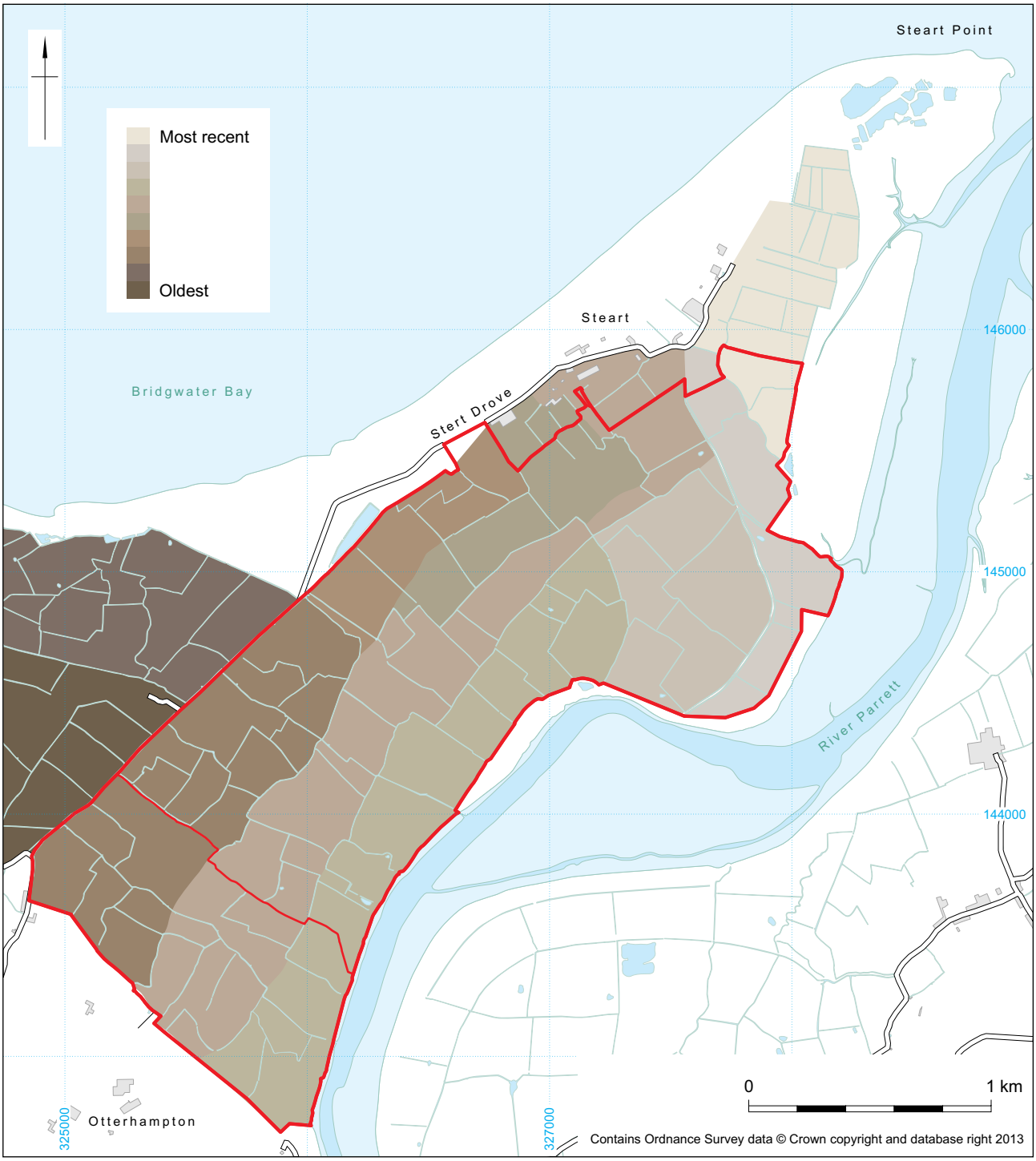

Figure 5.4 Postulated lines of land reclamation

courts into the early post-medieval period. Otterhampton tenants were ordered to scour out ditches and make hedges in the 1540s, and fined for breaking gates leading on to the marshes (TNA: PRO, LR 3/123). By the early 14th century a sea wall had been built alongside the Parrett, enclosing an area known as *La Harth* or *La Warth*, its maintenance being the responsibility of adjoining landowners. The wall was destroyed by the 'great inundation of waters' which 'quite drowned' the parish in 1607, but was presumably repaired almost immediately. It was destroyed again and the riverside pastures and warths flooded to a depth of 4 feet above the original height of the walls in the hurricane of 1703; it was repaired the following year. Bad weather and the erosion of the Steart peninsula eventually caused serious damage in 1798 and a new wall was built between 1799 and 1802 (*VCH* 2004).

Medieval Expansion

From the 13th century, the Levels were being exploited with increasing intensity. Behind the shelter of the sea walls or embankments, the recovered land was used not only for grazing sheep and cattle (there were at least 13 oxen in Stockland in 1241: *VCH* 1992, 127), but arable farming and fishing became more important. By the 13th century, 'almost all of the high coastal clay-lands were embanked, drained and settled' (Rippon 2000a, 90). Analysis of population figures suggests a significant increase across central Somerset from *Domesday* to 1327, possibly suggesting active reclamation during this period, but this was not necessarily echoed in the parishes of the Lower Quantocks – both Otterhampton and Cannington parishes fell lower in the 1327 population 'league table' than in 1086 (Rippon 1997, 191, table 7.1). The assumption is that occupation continued in Areas 502 and 503 throughout the medieval period, from their 11th-/12th-century origins.

In the 13th century, Dorivy de Stokecurci (Stoke Courcy, later Stogursey) and his wife Albrea sold to High Fichet of Spaxton for one silver mark three acres of arable land called *La Sturte* with an adjacent meadow, a tenement of Stogursey manor (TNA: PRO, E 326/10463). Walter le Lyf held a virgate (approximately 30 acres) at *La Sterte* of the manor of Stogursey by military service in 1301. He paid a small amount when scutage was levied and owed suit to the manorial court (*CIPM* iv 342; TNA: PRO, E 142/8 m7). Eventually this estate evolved into another sub-manor. A second sub-manor called Steart was held from Stogursey in 1474 and in 1487 by the Michell family (*VCH* 1992).

The danger of flooding and the threat this posed to settlements and farms continued well into the medieval period, although actual references to flooding on the Somerset Levels are rare until the later 13th century; from this period onwards there was increased rainfall and storminess, and the environmental deterioration had its greatest impact in marginal areas (Rippon 1997, 219). Evidence from drainage ditch construction at Pawlett identified a flooding episode from the 13th century, and coastal defences continued to be important well into the post-medieval period. The Parrett Estuary seems to have suffered particularly badly from flooding in the late medieval period (*ibid.*, 244).

Molluscan evidence from the earliest enclosure ditches in Area 503 (11th to 12th century) indicates damp, marshy grassland with seasonal freshwater flooding and very occasional brackish water inundations, while the charred plant remains include weed seeds typical of grassland, field margins and arable environments, with a small number of seeds indicative of wetter areas, but there is no comparative data from features of 13th- or 14th-century date (see Wyles, Chapter 4). Evidence from elsewhere on the Levels suggests that this was a period characterised by retreat after the confident reclamation of the early medieval period (Rippon 1997, 219).

Evidence for a mixed economy is provided by the environmental material recovered from medieval features in Areas 502 and 503. These indicate the cultivation of free-threshing wheat, barley, oats and celtic beans, while the animal bone assemblage is dominated by livestock species, principally sheep. Other species present include domestic fowl, duck and goose, and also fish. This is in line with the general pattern of mixed economy along the higher coastal area of the Severn Levels (Rippon 1997, 226), and also coincides almost exactly with the documentary evidence – in 1275/6, for example, the manor of Stogursey threshed and sold wheat, barley, oats and peas, while its stock consisted of cattle, sheep and pigs; it sold substantial quantities of wool fleeces, cheese, pigeons, fish and hay (TNA: PRO, SC 6/974/8). In the 13th century land at Steart rendered to the lord of Stogursey two geese and five cloves of garlic at Michaelmas and two cheeses at Christmas, indicating the usual produce of the peninsula at this time (TNA: PRO, E 326/10463). The geese presumably grazed on the marsh pastures.

Few structural remains belonging to the medieval period were found on any of the sites excavated, although there were several postholes in Area 503, and any building stone might have been robbed for reuse elsewhere, for example in the post-medieval building in Area 503. The finds recovered in Areas 502 and 503 are typical of domestic midden refuse, and there is no reason to suppose that these were anything other than permanent, rather than seasonally occupied settlements, part of the pattern of dispersed houses and farmsteads seen across much of west Somerset in the medieval period, and particularly in the Lower Quantocks and Parrett Estuary (Aston 1982, 131; 1994; 2000; Rippon 1997, 194). It is nevertheless the case that, if livestock were kept at either site, this itself may have been on a seasonal basis, as the climate may have been too wet to sustain grazing over the winter (Rippon 1997, 229). The enclosure in Area 503 was remodelled sometime in the 14th century or later, but shortly after that the focus of occupation at this site shifted north-east to a new enclosure. It is difficult to be certain about Area 502, as the excavation trench clipped the edge of the enclosure, and the quantities of finds recovered are much lower than at Area 503, but it appears to have been broadly contemporaneous with the latter site.

The pottery suggests that sources of supply for the material culture of these small settlements continued

to be largely local, but was still supplemented by glazed finewares from the Bristol area, and also in the later 13th/14th centuries by finewares from the continent, moving via coastal trade around the south-western peninsula.

Post-Medieval Prosperity

Between the 16th and 18th centuries, the fertile area of the Levels continued to be extensively farmed; there was continued investment in reclamation, and improved water management (Rippon 1997, 247). Much of the historic landscape character of the Steart peninsula is a product of post-medieval cultivation. In 1547 arable land accounted for two-thirds of the recorded land of the manor of Stockland, but by 1655 the manor was said to be divided into woodland and marshland; the marsh was deep earth and healthy for sheep as well as producing wheat, barley, beans and peas (*VCH* 1992). Individual farms in the 17th century seem to have been modest in size and farming was generally mixed – as well as the crops already mentioned, reed, cider, and malt were also produced (*VCH* 2004).

Steart manor was held by the Tilley family in the 16th century, and centred on the Warren House (*VCH* 1992). John Leland described Stogursey as a 'good village' in 1542, and mentioned Steart as three miles along the coast at the mouth of the Bridgwater Estuary. He commented that there were no woods near this part of the coast, the only timber trees standing in the hedgerows of the enclosed fields (Chandler 1993, 426).

The post-medieval occupation in Areas 502 and 503 falls within the early part of this period; the pottery evidence (and almost complete absence of clay tobacco pipes, only a few stem fragments represented) suggests that both sites were abandoned during the 17th century. Sometime after the 14th century, and probably during the 16th century, a new rectangular enclosure ditch was dug and, on the basis of the survival of a stone-built latrine draining into the enclosure ditch, a masonry building was constructed. The construction cut for the latrine contained important dating evidence in the form of an Anglo-Gallic coin dating to the first half of the 15th century, and a lead pilgrim's ampulla of probably 14th- or 15th- century date (see Chapter 3, Fig. 3.6, 4). It seems too much of a coincidence to suggest that both objects might have been accidentally incorporated into the latrine construction trench, and there may be an element of deliberate deposition here, perhaps as a 'foundation deposit' of curated objects. They seem more likely to have arrived as personal property rather as traded items. Whatever the circumstances of their deposition, these two artefacts (and it is tempting to see them together, as items once owned by one individual) are evidence of the wide-ranging connections of this small, isolated settlement on the Somerset coast. These connections are further illustrated by the three 16th-/17th-century Venetian or Dutch glass beads, which are likely to have arrived as a result of coastal trade (see Fig. 3.6, 6–8 and Pl. 3.1). Both local and foreign shipping plied the north Devon and Somerset coasts, en route to Bristol, south Wales, Ireland and beyond. Nearby Combwich, Bridgwater's outport, had attracted maritime trade by the 14th century, when both local and foreign vessels were shipping corn from there to Ireland and elsewhere. Ships called there regularly in the 16th and 17th centuries, and in the 16th century some shipping put into Steart bay (*VCH* 1992).

Apart from these exotic artefacts, the remainder of the material assemblage from Areas 502 and 503 is of an almost entirely utilitarian nature. There are virtually no finewares amongst the pottery assemblage, which is focused on kitchen wares. The high numbers of bowls amongst this assemblage has been noted. The evidence suggests that, while bowls (particularly the wide, flared bowls seen here) are often associated with dairying activities, some at least (from the evidence of surface sooting) had been used for cooking, or possibly as salting pans.

Nevertheless, this was a period of increasing pastoralism, and the region was particularly noted for its dairy produce (Rippon 1997, 258). The animal bone assemblage recovered from Areas 502 and 503 does not entirely support this, as sheep are still predominant, but the sample is very small and not necessarily representative. In the 17th century sheep were kept on Steart Common, while common pasture rights for horses, cattle and sheep on both the *warth* outside the sea and river walls and the inlands inside them, including on Steart Common, were documented in various deeds (Hawkins 1965, 14–15; SomHC DD\BW/2/148; DD\NW/63).

Palaeoenvironmental data for this period include evidence for cereals (wheat, oats), celtic beans and possibly peas, and pollen from grassland and saltmarsh species, suggesting pastoral activity. Leland noted that a great abundance of beans was grown in this coastal region and that there was a regularised market for them at Bridgwater, at times when imported corn was expensive. The area was also well supplied with wheat and cattle (Chandler 1993, 426). In 1543 a merchant of Minehead loaded a cargo of beans in his own ship at Steart, ostensibly to be taken to Wales. However, contrary to his bond and a royal proclamation against the export of grain, he sailed only as far as the north side of Brean Down where he transferred the beans to a Spanish vessel for transport

to Spain. This treason by pulses did not go unnoticed, and the case was brought before the Court of Star Chamber at Westminster (TNA: PRO, STAC 2/27/63).

Overwhelmed by the Sea?

Given the apparent prosperity of the region in the 17th century, it is perhaps surprising that both 'moated' sites in Areas 502 and 503 seem to have been abandoned at this time, Area 502 perhaps in the early/mid-17th century, and Area 503 in the mid-/late 17th century. As part of a wider pattern, Rippon suggests that settlement in the region contracted most in the early post-medieval period rather than in the 14th and 15th centuries (Rippon 1997, 248). In this particular instance, it may be that these small isolated sites were adversely affected by local flooding events. In the manor of Wick in Stogursey parish the sea walls were suffering from coastal erosion in 1614, including the loss of cottages by the shore (*VCH* 1992). In 1681 the manor included profits of wreck, stone and timber from the shore, and new land 'accruing by the violence of the sea' (*ibid.*, 152). Forty acres beside the Parrett were eroded away during a great storm in 1637 but, prior to this, in 1607 the parish of Pawlett was overwhelmed by a 'great inundation of waters', in an event which has been linked to a possible tsunami wave (Bryant and Haslett 2002). This severe flooding event must have affected the Steart peninsula, and it is tempting to attribute to it the abandonment of Area 502 at least, while Area 503 seems to have survived for perhaps one more generation. In 1655 it was noted that the marshlands of Stockland manor were often flooded both by the sea and by freshwater floods, spoiling valuable grazing grass for cattle. This situation could have been improved if the villagers had kept their watercourses and *Reenes* clear, but they were 'full of mire and weeds' (BRO 04237 ff27, 30, 38v). In the 1660s, Steart Common frequently flooded almost as far as Steart House (*VCH* 1992).

Later Decline

There were notable floods from the sea in the Steart and Huntspill area in 1703 and 1737 (SomHC DD\SAS/C795/SE/113/2 p16), and in 1723 the lowlands and marshes were said to be overflowed by freshwater floods from the land every winter. In this year it was alleged that landowners on the sea frontage of the peninsula were charged about £50 a mile each year 'to maintain strong walls or banks against the raging of the tide and the rapidity of the currents' (SomHC D\RA/9/9).

By the 18th century the system of sea and river walls and drainage dykes had extended to the unenclosed grazing land of the Steart Common area. A lease of 14 acres of land at Steart from Sir Thomas Hales to Thomas Cox in 1754 obliged the lessee to maintain drains and banks along the 'Coombwich River': and Cox was enjoined not to break up the pasture for tillage (SomHC DD\BW/2/805). Behind the shelter of the sea walls, the land was grazed by cattle; sheep grazed on the commons in the *outwarth*. The land within the sea and river walls was a combination of pasture, meadow and arable, although pasture probably predominated.

Growing crops seems to have become difficult in the 19th century. The historic record for Stogursey from 1831 indicates that cropping on coastal lands was only possible in three years out of five, and the poor clay in the area could only successfully grow vetches. At the tithe surveys of *c.* 1840, only near the tip of the Steart peninsula and small areas around the villages of Otterhampton and Stockland Bristol were there meadows and arable fields; the remainder of the area was uniformly utilised as pasture (TNA IR 29/30/230, 323, 390). This represents a considerable agricultural retreat from the patterns of medieval and early modern ridge and furrow traced by fieldwork (Wessex Archaeology 2009, fig. 3). At this time, small farms were disappearing, and their lands were being amalgamated into larger farms. By 1851, the number of large farms (over 150 acres) had doubled (*VCH* 1992).

Other farms were disappearing due to changes in the course of the River Parrett. A map of 1822 records a building and enclosure on Slab Batch or Fenning Island, while Island Farm, originally on Dunball Island, became part of the mainland in the 19th century; it was ruinous by 1947. A variety of buildings were recorded on Steart Island on 19th century cartographic sources. However, as no trace of the buildings was discovered during a 1994 field survey, they are thought to have been obscured by shifting sand dunes (McDonnell 1995).

Very little evidence was recovered during the current fieldwork for activity after the 17th century – a few sherds of pottery, fragments of bricks and ceramic drainpipes, fragments of bottle glass, nearly all from the evaluation trenches. This negative evidence, combined with the results of earlier desk-based assessment, suggest that settlement largely contracted to the current village locations – Steart, Stockland Bristol, Stolford and Otterhampton. However, fish weirs, coastal defences and groynes continued to be built (Wessex Archaeology 2008, 21, fig. 2). In 1841 there were eight commercial fishermen at Stolford and one at Steart, but by the late 20th century the industry had virtually died out; in 2000 the last 'mud-horse fisherman' was still in

action on the Stert Flats (Crowther and Dickson 2008, 114–7).

Conclusions

The fieldwork conducted on the Steart peninsula has highlighted a sequence of activity from the later prehistoric period through to the post-medieval period, although this was not continuous, a hiatus in the post-Roman period corresponding to the wider pattern seen across the Somerset Levels. Activity throughout seems to have been limited to the occupation of small, isolated sites, probably no more than farmsteads, and in some cases perhaps occupied only seasonally. One of the major limitations to activity on the peninsula at any period must have been its location in a dynamic landscape in which marine transgressions and regressions, and major climatic episodes, played a major part. Nevertheless, it is clear from the archaeological evidence, and from the historic record, that the peninsula has been actively exploited for arable and pastoral farming, and for the collection of marine resources, over a lengthy period. Furthermore, despite the marginal location, the inhabitants were not isolated, at least from the Romano-British period onwards, as coastal trade increased the sources of supply. Farming still plays a part in the economy of the peninsula to the present day, although the fishing industry has virtually disappeared.

The landscape is still evolving, and the economy changing. After centuries of the construction of successive coastal defences, the current development by the Environment Agency, in conjunction with the Wildfowl and Wetlands Trust has seen a breaching of the existing sea wall, resulting in the reversion of a large part of the peninsula to managed saltmarsh and freshwater wetlands. The new Steart Marshes are designed to flood about 100 times a year, and will provide vital flood defences for Steart village, as well as an extensive wildlife habitat.

Appendix 1
Pottery Fabric Descriptions

Prehistoric

C1: Moderately soft, coarse fabric containing common (20%), moderately-sorted sub-angular limestone (< 2 mm across), and moderate (10%) quantities of rounded quartz sands (< 0.5 mm).

Q1: Hard coarse fabric with common (15%) poorly-sorted, angular sandstone, 1–4 mm across and moderate sub-rounded quartz sands (< 0.5 mm).

Q2: Soft fabric, moderate (10%) sub-rounded quartz sand (< 0.5 mm) with sparse (5%) organic material, 1–3 mm long and sparse (3%) unidentified laminar rock (1–3 mm).

Q3: Soft, finer sandy fabric with moderate (15%) sub-rounded quartz sand, (< 0.5 mm), and rare larger grains (up to 2 mm).

Q4: Hard, coarse fabric with moderate (10%) rounded quartz sand (< 2 mm) and sparse (7%) sub-rounded grog (2–3 mm).

R1: Hard, coarse fabric containing moderate (10%) quartz sand (< 0.5 mm) and sparse (7–10%) poorly sorted, unidentified rock fragments (1–5 mm).

R2: Hard, coarse fabric with sparse (3–5%) poorly sorted, sub-rounded fragments of pale, soft, flaky, rock with a distinct sparkly appearance (1–4 mm), sparse (5%) poorly sorted, sub-rounded quartz sand (0.25–1 mm) and rare (2%) sandstone (< 3 mm).

R3: Hard, coarse fabric with moderate (10%) poorly sorted, rounded pieces of unidentified laminar rock (possibly shale) 1–4 mm along with moderate (10%) sub-rounded quartz sands (0.5–1 mm) and sparse (7%) sandstone (1–2 mm).

R4: Hard, silty fabric containing rare (1%) poorly sorted, sub-rounded, sandstone (2–4 mm) and quartz sand (< 1 mm).

S1: Soft fabric, with sparse (3%) finely crushed shell (0.5–1 mm) with sparse (3%) poorly sorted, sub-rounded quartz sand (< 1 mm) and rare (1%) sandstone (1 mm).

Medieval

*Fabrics submitted for petrological analysis (see Appendix 2)

L400: Hard, coarse fabric, with sparse (3–10%) crushed limestone <1 mm; sparse angular quartzite <1 mm; rare (1–3%) rounded quartz grains; rare iron oxides.

Q400: Greensand-derived coarseware: hard, coarse fabric with moderate (10–20%) rounded quartz grains <2 mm, iron-stained; rare subangular flint/chert; rare iron oxides.

*Q401: Hard, coarse fabric with moderate rounded quartz sand (< 2 mm) and sparse sub-rounded grog (2–3 mm).

Q402: Hard, moderately coarse sandy fabric, pale-firing (buff/cream with pale grey core) and slightly micaceous; sparse, poorly sorted, subangular quartz <0.5 mm; sparse, subangular grey rock <1 mm; rare iron oxides.

Q403: Hard, moderately fine sandy fabric, oxidised (pale salmon pink with pale grey core) and slightly micaceous; smooth surfaces; common (20–30%), poorly sorted, subangular/subrounded quartz <0.5 mm; rare iron oxides.

Q404: Hard, moderately coarse sandy ware; moderate, poorly sorted, subangular quartz <0.25 mm; sparse ironstone <1 mm.

Q405: Moderately fine, hard sandy fabric, pale-firing (pale grey with dark grey surfaces); very common (30–40%), well sorted, subangular/subrounded quartz <0.25 mm.

Q407: Hard, coarse, micaceous fabric; common, well sorted, angular quartzite <0.5 mm; sparse, coarse mica flakes <1 mm.

Q408: Hard, fine sandy fabric, oxidised (orange-red); moderate, well sorted, subrounded quartz <0.25 mm; rare iron oxides.

*R400: Hard, silty fabric containing rare poorly sorted, sub-rounded, sandstone (2–4 mm) and quartz sand (<1 mm).

R401: Hard, coarse fabric, micaceous, with external slip/slurry; sparse sandstone <5mm; rare sub-angular quartz <3 mm.

R402: Hard, coarse fabric; sparse sandstone <2 mm; rare rounded quartz <0.5 mm; rare iron oxides.

*R403: Hard, coarse fabric with moderate poorly sorted, rounded pieces of unidentified laminar rock (possibly shale) 1–4 mm along with moderate sub-rounded quartz sands (0.5–1 mm) and sparse sandstone (1–2 mm).

*R404: Hard, silty fabric containing rare poorly sorted, sub-rounded, sandstone (2–4 mm) and quartz sand (< 1 mm).

*R405: Hard, coarse fabric with sparse poorly sorted, sub-rounded fragments of pale, soft, flaky, rock with a distinct sparkly appearance (1–4 mm), sparse, poorly sorted, sub-rounded quartz sand (0.25–1 mm) and rare sandstone (< 3 mm).

Appendix 2
Petrographic Report of Thin-Section Analyses

by Imogen Wood

Aims of Analysis

Five covered thin-section (TS) slides were produced for petrographic analysis, selected to determine the character and/or validity of variations observed within the macroscopically classified 'Rock-tempered' fabric group (TS2–5). TS1 had been classified as Q401, being a possible later medieval sandy ware sherd. A secondary consideration of this analysis was establish if any similarities could be found between the Steart Point fabrics and the nearby site of Brent Knoll (Wood forthcoming), which also produced medieval rock-tempered fabric types.

Geology

The solid geology within the site consists of Mercia Mudstone Group and the Lower Lias (Brown 1980). In places the solid geology is overlain by Pleistocene sediments, which comprise sands and gravels, undifferentiated Head deposits, and alluvium interspersed with peat layers. The upper alluvium is equivalent to the Wentlooge palaeosol, which is thought to have formed as a result of land drainage during the Romano-British period (Allen and Rae 1987).

Methodology

The thin sections were analysed using a polarizing petrographic microscope (Zeiss Axioskop 40), using a range of 50-100x magnification. The minerals and rock fragments listed below are in order of frequency within the matrix, ranging from *abundant* to *rare*.

Results

Thin Section 1

Macroscopic Fabric type Q401 context (20504)
Hard, coarse fabric with moderate (10%) rounded quartz sand (< 2 mm) and sparse (7%) sub-rounded grog (2–3 mm)

Microscopic description: oxidised fabric; temper 20%

- Quartz, abundant, grains are well-rounded to sub-rounded, 0.3–0.1 mm
- Limonite/clay pellet, iron oxide, common, dark brown/red, soft rounded pellets, nearly opaque in thin section, some particles contain grains of quartz, degree of high plasticity in production, range of sizes, well-rounded to sub-rounded in shape, 1.5–0.4 mm
- Red Sandstone, coarse, sparse, composed of quartz and alteration mineral and Biotite, sub-rounded, 1.0–0.2 mm
- Red Sandstone, rare, fine quartz in dark matrix, well-rounded, 1.5–0.8 mm

Matrix: Abundant angular quartz and occasional mica cleavage flakes in an optically-anisotropic clay

This is a Red Sandstone and quartz-rich fabric in a matrix of fine estuarine locally-sourced clay. The common inclusions of iron-rich clay pellets, not grog as suggested in the macroscopic analysis, suggests this was a waterlogged clay containing degraded Red Sandstone and angular quartz. There is little degree of processing in production suggesting little or no temper was needed.

Thin Section 2

Macroscopic Fabric type R400 context (21303)
Hard, silty fabric containing rare (1%) poorly sorted, sub-rounded, sandstone (2–4 mm) and quartz sand (<1 mm).

Microscopic description: reduced fabric; temper 25%

- Red sandstone, fine, common, quartz grains in dark brown matrix leaching weathered minerals with rare Biotite mica cleavage flakes, well-rounded, 1.9–0.5 mm
- Red sandstone, coarse, scatter, composed of quartz with rare Biotite mica, sub-rounded, 1.7 mm
- Limonite, iron oxide, scatter, dark brown pellets, nearly opaque in thin section, well-rounded, 0.9 mm

- Quartz, sparse, well-rounded, 0.5 mm
- Strained quartz, rare, sub-rounded in shape, 1.3 mm
- Epidote, rare, possible alteration product of Biotite, pink/green, rare, no visible structure
- Mudstone, rare, matrix of fine quartz grains in lamella structure, rounded, 1.7 mm

Matrix: very fine clay, few visible inclusions in an optically-anisotropic clay

This fabric is markedly different to the other thin sections from Steart Point. This is due to the lack of angular inclusions and their overall large size, suggesting it is tempered with river sand. The degree of abrasion and rounding to the grains suggests the use of sand from the lower reaches of (possibly) the River Parrett. The range of minerals and rock fragments would suggest a large catchment area.

Thin Section 3 and 4

Two sherds from this context were thin-sectioned for analysis, A and B.

Macroscopic Fabric type R405 context (20535)
Hard, coarse fabric with sparse (3–5%) poorly sorted, sub-rounded fragments of pale, soft, flaky, rock with a distinct sparkly appearance (1–4 mm), sparse (5%) poorly sorted, sub-rounded quartz sand (0.25–1 mm) and rare (2%) sandstone (< 3 mm).

Microscopic description (3A): reduced fabric; temper 25%
- Quartz, common, sub-angular, 0.5 mm
- Red sandstone, scatter, quartz conglomerate, rounded to well-rounded in shape, rare Biotite mica cleavage flakes in matrix, 1.2 mm
- Red sandstone coarse, scatter, quartz rich with traces of altered micas, rounded, 1.0 mm
- Limonite, scatter, well-rounded, 0.6 mm
- Biotite, sparse, cleavage flakes, 1.0 mm
- Mudstone, rare, matrix of fine quartz grains in a lamella structure, generally rounded and oblong shaped pieces, 1.0 mm

Matrix: Abundant sub-angular quartz in an optically-anisotropic clay

The quartz and biotite are weathered minerals derived from the same parent Red Sandstone rock. The relative uniformity of the grain sizes suggests an element of processing in production.

Microscopic description (4B): oxidised fabric; temper 10%
- Quartz, abundant, well-rounded, 0.5 mm
- Red Sandstone, coarse, common, angular, 1.9–0.6 mm
- Mudstone, rare, dense quartz with laminated structure, rounded, 0.5 mm
- Limonite, iron oxide, rare, dark brown pellets, opaque in thin section with some containing grains of quartz and mica, well-rounded to rounded but in varying size, 0.4 mm.

Matrix: Common angular quartz 0.2mm in an optically-anisotropic clay

This fabric has a Red Sandstone temper in a fine quartz and mudstone clay. The lack of finer grained sandstone suggests the clay was sourced in an area further away from the sandstone. The size and angularity of the Red Sandstone suggests possible crushing before addition.

Thin Section 5

Macroscopic Fabric type R403 context (20526)
Hard, coarse fabric with moderate (10%) poorly sorted, rounded pieces of unidentified laminar rock (possibly shale) 1–4 mm along with moderate (10%) sub- rounded quartz sands (0.5–1 mm) and sparse (7%) sandstone (1–2 mm).

Microscopic description: reduced fabric; temper 20%
- Quartz, common, sub-angular, 0.3 mm
- Red sandstone, fine, scatter, fine quartz grains in in dark brown iron-rich matrix, well-rounded, 2.5–1.0 mm
- Red sandstone, coarse, scatter, quartz rich in dark matrix, angular, 1.9–0.2 mm
- Limonite, iron oxide, sparse, dark red, nearly opaque in thin section with occasional quartz grains, well-rounded, 0.9 mm
- Strained quartz, rare, rounded, 2.0 mm

Matrix: relatively fine clay with occasional sub-angular quartz and sandstone grains in an optically-anisotropic clay.

This is a fine Red Sandstone rich fabric with sub-angular quartz inclusions. The combination of rounded fine Red Sandstone and more angular grains suggest this is a clay purely derived from the Quantocks area with little processing in production. This is broadly similar to a fabric from Brent Knoll (Wood forthcoming, TS3, fabric R402).

Thin Section 6

Macroscopic Fabric type R404 context (20518)

Hard, silty fabric containing rare (1%) poorly sorted, sub-rounded, sandstone (2–4 mm) and quartz sand (< 1 mm).

Microscopic description: reduced fabric; temper 20%

- Quartz, common, angular, 0.5–0.2 mm
- Red sandstone, coarse, scatter, quartz rich with alteration minerals in dark brown matrix leaching weathered minerals, angular, 1.0–0.3 mm
- Red Sandstone, fine, scatter, quartz grains in dark brown matrix with rare Biotite mica cleavage flakes, sub-rounded, 1.0–0.4 mm
- Mudstone/slate, rare, dense quartz in dark matrix, rounded oblong in shape, 1.9 mm
- Limonite, rare, opaque in thin section, rounded, 0.8 mm
- Strained quartz, rare, sub-rounded, 0.2 mm

Matrix: fine quartz-rich clay with rare mica in an optically-anisotropic clay

This fabric is very similar to thin sections TS3 and TS4. The finer sub-rounded and angular Red Sandstone grains suggest a Red Sandstone-derived clay.

Discussion

The results of the thin section analysis suggest there is some variability in the sourcing of clays and the production techniques employed. The majority of the fabrics are derived from Sandstone-rich derived clay with a varying range of minerals with the exception of TS2 (R400). The lack of limestone and chert inclusions rules out the Mendips side of the immediate area for this fabric group. It is reasonable to assume that these sandstone clay fabrics derived from a suite of rocks and minerals consistent with the Quantock Hills area, most likely the alluvium in river valleys leading off this geology. This is consistent with Fabric 2 identified by Roger Taylor (2008) from medieval pottery found at Brent Knoll village. However, the presence of Limonite would suggest a more waterlogged clay source perhaps closer to Steart Point. The composition of minerals in TS5 (R403) and the lack of mudstone would indicate a source located on the Quantocks and one that did not receive much processing in production.

The larger coarse Red Sandstone inclusions identified in some of the pottery is not distinctively red in macroscopic analysis due to the leaching of iron oxides and alteration of the matrix, which has resulted in making the quartz grains more visible, presenting as a highly-reflective friable rock fragment. In thin section the coarse Red Sandstone has abundant quartz and some mica in an iron rich matrix with leached clay minerals. Some fragments of quartz are set in a recrystallized and silicified iron rich matrix and some fragments contain strained and deformed quartz occasionally including Biotite mica.

The fabrics of TS3, TS4 (R405) and TS6 (R404) suggest a source area at the base of the Quantocks, as indicated by the larger more angular Red sandstone fragments in the fabric. It is possible that these were added as tempering material. The common inclusions of iron-rich clay pellets (not grog) in TS1 (Q401) would suggest this was a waterlogged clay containing degraded Red Sandstone and angular quartz. There is little apparent degree of processing in production, suggesting little or no temper was needed. The abundance of fine quartz grains in the matrix of TS1 would certainly fit the description of a 'Sandy Ware' making it a good candidate for Later Medieval Sandy Ware.

The wider range of minerals and higher degree of rounding seen in TS2 (R400) is the exception. The fabric strongly suggests a sand temper derived in the lower reaches of the River Parrett or estuarine sands along the Steart and Berrow flats. It is directly comparable with a sample from a medieval assemblage at Brent Knoll (Wood forthcoming, TS2, fabric R400).

The results of the analysis highlight the variability within one clay source area and offer a valuable contribution to further understanding the production of Sandstone-rich coarsewares in west Somerset.

It may be noted that there are documentary references to medieval pottery manufacture in the 13th and 14th centuries at Bridgwater, about 4–7 km to the south of the site, and at Nether Stowey, about 10 km to the south-west (Le Patourel 1968, 125).

This assemblage suggests that pottery production on a household scale was thriving along the River Parrett zone in this period. However, caution should be taken in assigning a more precise source location for the clay and/or temper due extent of the River Severn tidal bore which reaches Bridgwater and may in the past have gone further inland. This would transport not only derived minerals and rock fragments from the River Parrett but also the River Severn.

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TNA: PRO, E 142/8	lands of Robert Walerand 29 Edward 1, inc m7 Stoke Courcy; m8 Cannington
TNA: PRO, E 326/10463	Dorivy and Aubrey de Stokecurci to Hugh Fichet: Stert
TNA: PRO, IR 29/30/323	Otterhampton tithe apportionment
TNA: PRO, LR 3/123	court book inc Otterhampton and Newnham near Stogursey, Henry VI to Edward VI
TNA: PRO, SC 6/974/8	Stogursey: lands of Robert Walerand 4 Edward I
TNA: PRO, SC 6/1090/4 m14	lands of John de Walerand idiot 24/25 Edward I, inc Stoke Courcy and Cannington
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SomHC D\RA/2/9/20	plans, inc erosion at Steart 1922
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Archaeological works at Steart Point peninsula, near Bridgwater, have recovered evidence for the exploitation and settlement of the peninsula from the prehistoric period onwards. The results overall fit broad regional patterns of wetland environments in Southern Britain, where phases of land reclamation and climatic amelioration have been key factors in the successful exploitation, occupation and development of these landscapes. These phases of reclamation are strongly linked to the prevailing patterns of associated sea level increases which periodically made coastal wetland landscapes less favourable habitats, the most recent examples occurring in the late Roman to early medieval and late medieval to early post-medieval periods.

A number of significant sites and areas of past human activity and inhabitation from the Iron Age, the Romano-British period, the medieval and early post-medieval periods have been recorded. The results follow broad regional patterns seen in the Severn Estuary Levels, with the more regularly planned farming landscapes and permanent settlement evidence from the Romano-British period onwards, developing from seasonal, episodic exploitation of this resource-rich salt-marsh landscape. It has also highlighted extensive continuities within the Steart Point landscape of land divisions and drainage patterns which have their inception at least as far back as the early medieval period and possibly the Romano-British period.

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