Medieval to modern suburban material culture and sequence at Grand Arcade, Cambridge

Archaeological investigations of an eleventh-to twentieth-century suburb and town ditch

Craig Cessford and Alison Dickens

Cambridge Archaeological Unit Urban Archaeology Series
The Archaeology of Cambridge Volume 1
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By Craig Cessford and Alison Dickens

With contributions by
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This work is dedicated to the memory of two distinguished archaeologists with long standing Cambridge connections who influenced it in very different ways. Tony (Anthony) Paget Baggs (1934–2006) had a long career in architectural recording at the Royal Commission on Historical Monuments for England and the Victoria County History. Following his retirement in 1997 he continued working in a freelance capacity and undertook many projects for the Cambridge Archaeological Unit, including the work at Grand Arcade which he unfortunately did not live to complete. Tony was always generous with his time and immense knowledge, his presence was one of the most enjoyable aspects of the fieldwork at Grand Arcade. This book owes much to him and is undoubtedly the poorer through his demise. John Amyas Alexander (1922–2010) conducted numerous excavations in Britain, Africa and elsewhere. The investigations of the King’s Ditch that he directed in 1969–71 only rank amongst his more minor achievements, but it was a great pleasure to be able to show him around our subsequent excavations over three decades later (see Fig. 5.93B). We must also mention two other contributors to this volume who are sadly no longer with us, Richard Darrah and Alan Vince. Richard possessed an unparalleled understanding of woodworking that has greatly enhanced this volume and will be greatly missed. Similarly Alan Vince provided unique specialist knowledge.

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The graphics are primarily the work of Vicki Herring with oversight and input from Andrew Hall. Photographs are principally by Dave Webb, Craig Cessford and member of the excavation team. The timber drawings are largely based upon original drawings by Nigel Randall, with the exception of a number of illustrations supplied by Richard Darrah (Figs. 4.8C, 4.41C, 4.42C, 4.45D, 4.47D, 5.87D). Drawings of stone mouldings are based upon illustrations by Mark Samuel (Figs. 4.34A–H, 4.63C–G, 4.64, 5.11A–D, 5.11G, 5.26, 5.36, 6.15), whilst the leather drawings were informed by sketches by Quita Mould. Images from the digital model of the standing buildings owe much to the work of Marcus Abbott. A number of images are courtesy of the Cambridgeshire Collection, Cambridge Central Library (Figs. 1.10 lower image, 3.24, 5.59, 5.77C–D, 5.78A–B, 5.83, 6.3B, 6.14, 6.17D), and are reproduced thanks to the assistance of Chris Jakes. Aerial photographs of the Grand Arcade site (front cover and Fig. 1.4) are courtesy of Bovis Lend Lease Ltd. and the Cambridge University Collection of Aerial Photographs (Fig.1.14). The leather jug (Fig. 5.6B) is copyright MOLA, Faith Vardy. Some animal bone photographs are by Lorrain Higbee (Fig. 3.12C, 3.14A–D, 3.25D–E, 4.14E, 4.26B, 4.50B, 4.69) and the fish bone photo (Fig. 4.27B) is by Jen Harland. The portrait of Barnett Leach III on a box lid (Fig. 7.3) is
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The archaeology of Lion Yard was almost entirely lost and little else was done for the next quarter of a century. Medieval Cambridge was far from the interests of academic archaeology in Cambridge then or for decades to come and it was only with the coming into force of Planning Policy Guidance 16 in 1990 that things began rapidly to change. Much of this welcome new work was, however, done in central Cambridge, within the line of the King’s Ditch.

The singular and wholly exceptional achievement of the present volume is that it represents what is probably the largest area of suburban development ever investigated in an English or to my knowledge European city:

– throughout time, from the beginnings of settlement to the present day,
– covering every kind of documentary, artefactual and environmental evidence,
– without social bias, from the most simple to the most elevated,
– and closely related in visual and recording to the actual patterns created and, most important, to the elements that will now survive into the future.

The innovative element is the way the archaeological evidence (excavation and standing buildings) is presented together with the evidence of the written sources and with historic images of every kind. And this is not done in the ‘traditional ’ way of separate, usually sequential, sections devoted to each kind of evidence, but rather by the way in which the sources
are assembled so that the relevant parts of the evidence are woven together, phase by phase.

For the present writer, the whole approach of this remarkable volume is demonstrated by a single exciting photograph (Fig. 2.6). This looks across the excavation towards the standing buildings on Hadstock Way and shows how the line of an excavated early 12th-century boundary ditch coincides precisely with a property division still in use today.

Martin Biddle
5 December 2018
Summary

Large-scale excavations undertaken by the Cambridge Archaeological Unit in 2005–6 at the Grand Arcade and Christ’s Lane sites in Cambridge allowed extensive and intensive investigation of both the town ditch and two street blocks of a suburb lying outside it. The town ditch, known as the King’s Ditch, was created in the eleventh or twelfth centuries and was then recut on a number of occasions with a surviving sequence extending until the mid-sixteenth century including a timber bridge, plus some later features. In the suburb dispersed occupation began in the mid-eleventh century with a planned layout following in the early twelfth century. Significant proportions of the backyard areas of 14 plots founded at this time were investigated and their development traced up to the present day, including a detailed programme of standing building recording plus intensive documentary and cartographic analysis. Substantial assemblages of a wide range of artefact types were recovered, including large quantities leather and timber preserved in waterlogged conditions. Major assemblages of pottery, animal bone and stone mouldings were analysed. The material includes a large number of substantial mid-eighteenth to early twentieth-century assemblages of pottery, glass, clay tobacco pipe and other materials that have been analysed in detail. There was also extensive environmental sampling, including pollen and insect analysis. As well as the scale of the assemblages there were a range of individually significant items including leather and wooden jugs and an imported Ottoman barrel from Greece. A considerable number of distinctive college related ceramic and glass items were also found.

The main feature types were pits, wells, postholes, beamslots, gullies, animal burials, ovens and ditches. From the eighteenth century onwards there were increased levels of building activity, during the early nineteenth century in particular the area became much more heavily built up and became urban rather than suburban in character. The features of this phase were largely brick built and consisted of walls, floors, cellars and soakaways. Of particular note is the fact that the depth of the development meant that the bases of all but the deepest features were investigated, uncovering the lower portions of features such as wells that are often left in situ by developer funded excavations.

Overall the work presents a detailed picture of the medieval town ditch on a scale that is previously unparalleled in Britain, one of the most comprehensive archaeological pictures of the development of the plots of a medieval and later suburb and treats eighteenth–twentieth-century material culture in a manner unparalleled in a British context.
Following on from the preceding pattern of medieval occupation in the Grand Arcade street block (Chapter 4), the seventeenth–twentieth-century material will now be discussed. This was a period of substantial change, which eventually saw the area transformed beyond all recognition. During the eighteenth century both the degree of occupation and the scale of commercial activity expanded markedly, while the nineteenth century witnessed a rapid escalation in the number of buildings and a commensurate decline in the amount of open space at the site. Commercial activities were now ascendant, although a strong residential component was retained. Moreover, by this date the area was no longer suburban but rather completely urban in character. Coeval with these developments, from the mid-eighteenth century onwards the range of material culture in use expanded significantly. Attitudes to such material also changed, as exemplified by the deposition of large ‘feature group’ assemblages on a hitherto unprecedented scale.

A major transformation occurred in the nature of the archaeological record from the seventeenth century onwards. Firstly, features no longer lay beneath the extensive deposit of garden soil at the site but were instead situated above it; the last feature to have been securely sealed beneath this horizon was constructed c. 1563–80, while the earliest to have conclusively truncated it dates to c. 1620–40. Consequently, although the garden soil still effectively formed the ‘surface’ for much of the street block – and, at the rear of many plots, continued to be utilized for horticulture and other purposes – it no longer impacted on the stratigraphic resolution of the archaeological remains to the same degree that it had during the preceding period (Chapter 4). Secondly, the degree of archaeological visibility during this period was greatly enhanced by the increasing prevalence of brick, which was utilized extensively in the construction of buildings, boundary walls, wells, soakaways and other features. Coinciding with this development, pit digging as a discrete phenomenon largely ceased; whilst a few pits continued to be dug into the seventeenth century, the practice was much less frequent and in almost all cases the intended function of the feature is readily identifiable.

Concomitant with these changes in the nature of the archaeological record, the same period also witnessed a marked escalation in both the quantity and quality of associated documentary and cartographic sources. Although the seventeenth-century leases remained broadly similar to those of the sixteenth century, for example, the existence of parish registers for St Andrew the Great from 1635 onwards – as well as hearth tax returns between 1662 and 1689 – means that for the first time it is often possible to obtain additional information regarding specific individuals. Similarly, while the late sixteenth-century plans provide some basis for understanding the area in the early seventeenth century (Fig. 4.29), a much more accurate map was produced by David Loggan in 1688 (Fig. 5.1). Its vertical perspective and increased reliability mean that from this point on the contemporary cartographic and archaeological evidence can be much more firmly correlated. Moreover, into the eighteenth and particularly nineteenth centuries the extent, accuracy and reliability of both the documentary and cartographic material continues to increase; individuals can be traced via an expanding array of sources such as trade directories and census returns, thereby providing a previously unparalleled level of background information.

This combination of increased archaeological visibility, greater stratigraphic resolution and extensive, highly detailed documentary and cartographic evidence has a profound impact on the manner in which the archaeological remains can be presented. From the seventeenth century onwards, archaeologically identified ‘properties’ and documentarily recorded ‘plots’ can be unambiguously related to one
other. It is therefore no longer necessary to discuss patterns of development on a generic, site-wide basis (Chapter 4). Instead, the individual sequences generated within particular securely bounded plots can be adduced. This approach, which involves constructing a series of discrete ‘tenement narratives’ (Bowsher et al. 2007; Hall & Hunter-Mann 2002), has the benefit of introducing a level of subtlety and nuance that was previously unattainable. To maintain coherency, the boundaries of the various plot units remain consistent throughout this period – minor variations from this pattern at particular points in time are discussed on an individual basis – and an identical numbering system has been retained from previous chapters (Fig. 5.2; see also Chapter 1).

Equal quantities of information are not available in all instances. Some of the most well documented plots contained few if any archaeological remains, for instance, and are thus treated in a relatively cursory manner. Similarly, from the eighteenth century onwards a number of standing buildings remained extant at the site; these structures were thoroughly recorded in 2005–6 (Baggs & Dickens 2005; Dickens & Baggs 2009), but the results of this work are not presented exhaustively here. Instead, the most interesting and/or representative examples have been selected and their discussion has been integrated with that of the contemporary below-ground remains. A similarly integrated approach has also been adopted in regard to the extensive feature groups that were recovered and the supplementary documentary, cartographic and – by the mid-nineteenth century – photographic sources that are available. Where multiple categories of evidence coincide, a more detailed treatment is presented. As in Chapter 4, a series of case studies are also presented in order introduce a level of thick

Figure 5.1. Map of the area published by David Loggan in 1688.
description which counterpoints the more general presentation of the majority of material.

Finally, it is notable that the discrete nature of many of the period’s assemblages, allied with the wealth of documentary and cartographic information that accompanies them, means that they can make a substantive contribution to a wide range of research topics. Accordingly, a number of publications have been produced that address different aspects of the material’s potential. These include: the contribution of Grand Arcade to the debate surrounding the relevance of post-medieval urban archaeology in a developer-funded context (Cessford 2009); material associated with life in an early twentieth-century department store (Cessford 2012); the materiality of writing (Cessford 2013a); a materialized biography of a nineteenth-century household (Cessford 2014a); the archaeology of garden-related material culture (Cessford 2014b), the archaeology of nineteenth-century childhood (Cessford 2018a) and assemblages in general (Cessford 2017a). Many of these same subjects will also be addressed within the following account. In order to avoid undue repetition, in those instances where a full discussion exists elsewhere this will be referenced as appropriate.

This chapter adopts a similar structure to that previously employed in Chapter 4. It has been divided into two sections. The first presents a series of tenement narratives pertaining to the seventeenth–twentieth-century archaeological remains, the second the contemporary artefactual and environmental assemblages that were recovered. In addition, the first section has been further sub-divided into five parts, three of which – those pertaining to the seventeenth, eighteenth and nineteenth centuries respectively – contain two case studies each. 

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**Figure 5.2.** The distribution of seventeenth-century and later plots within the Grand Arcade street block, based on a combination of documentary and cartographic evidence, with the 2005–6 excavations areas overlain.
Seventeenth century incorporating specialist information from Steve Allen, Rachel Ballantyne, Richard Darrah, David Hall, Lorraine Higbee, Rosemary Horrox, Mark Samuel, Ian Tyers and Anne de Vareilles

The preceding pattern of medieval occupation that had predominated at the site since the mid-twelfth century came to an end c. 1550–60 (Chapter 4). By c. 1580–1600 sporadic examples of new feature-types had begun to appear, marking the beginning of a pattern that continued into the seventeenth century. During this period the King’s Ditch declined significantly in both size and importance (Chapter 3); although it remained a major topographic presence, it no longer formed an effective boundary. Due to the extent of later truncation, no ditch deposits of this date survived to be investigated in 2005–6.

On the national stage the seventeenth century witnessed the establishment of the Stuart dynasty (1603), the Civil War (1642–9), the Commonwealth (1649–60) and the Restoration (1660). Locally, it is notable for the beginning of large-scale reclamation of the fens in 1631 and the fact that for the first time in centuries no University Colleges were founded. In addition, in 1616 and 1619 there were complaints of the building of ‘unwholesome and base cottages’ everywhere in Cambridge and the subdivision of plots into ‘diverse small tenements’ (Cooper 1845, 110, 126–7), indicating an increasing density of occupation.

Compared to earlier centuries, relatively few archaeological features of seventeenth-century date were present in the Grand Arcade street block (Fig. 5.3). Nevertheless, it appears that this was a period of considerable expansion; although only traces of this were detectable archaeologically, the features that do exist clearly point to considerable investment in certain properties at particular points in time. Furthermore, documentary and particularly cartographic evidence indicates that the seventeenth century witnessed a considerable expansion in the density of occupation at the site (Fig. 5.1). In contrast to the map of 1592/1610 (Fig. 4.29), for example, by 1688 infilling meant that St Andrew’s Street presented a relatively continuous frontage, broken only by narrow passageways between buildings. Despite the quality of the seventeenth-century documentary and cartographic evidence, however, its relative sparsity makes it difficult to shift the level of analysis beyond consideration of individual features to that of more cohesive archaeological properties; the principal exception is Plot XVI in the 1680s.

During this period the third of the street block closest to St Andrew’s Street was densely occupied by buildings and yards, but the rear two-thirds remained predominately open garden/horticultural areas. Major changes had taken place along Downing Street and around Hogg Hill, and for the first time these areas represented genuine secondary foci of occupation. During the course of the seventeenth century the number of wells rose to five, although the fact that three of these were associated with a single plot renders the increase rather spurious in terms of overall levels of occupation and activity. Based on cartographic and documentary evidence, by the end of the seventeenth century there were around 30 households in the street block. As the mean household size in Cambridge at this time was 4.1 – with a substantial degree of variation based upon various modifying factors (Goose 1980, tabs. 4–5) – the estimated population of the street block was c. 120.

While isolated seventeenth-century features were identified in many plots there are only a few instances, most notably in Plots X and XVI, where anything approaching a meaningful pattern is apparent. There are, however, some individually significant deposits, foremost among which are a group of horse skulls in Pit 56 in Plot XIV and a sequence of pits in Plot XIV that were dug to dispose of six cows (ADPs 10–12).

Plot IX
Archaeologically, little evidence relating to the northern plots in the street block survived (Fig. 5.3). In Plot IX, however, late seventeenth-century Building 22 was encountered; this was represented by a series of brick-built footings situated at the eastern end of the area of archaeological excavation. This pattern closely corresponds to that shown on the 1688 plan, which indicates that the frontage was occupied by a series of building and yards while the rear two-thirds of the plot – which correspond to the majority of the investigated area – was covered by an orchard (Fig. 5.1).

Plot X/Plot XI
Plot X (incorporating Plot XI) was subdivided into three separately occupied messuages during this period. No features relating to the northern messuage survived and the only feature relating to the central messuage was late sixteenth-century stone-lined Well 37, which continued in use, although the 1688 plan suggests that it
Figure 5.3. Plan of all seventeenth-century features within the Grand Arcade street block and adjacent areas.
acted as a communal water source serving more than one messuage. The southern messuage went through a major transformation in the second quarter of the seventeenth century, linked to it becoming an inn called Le Chequor that was first mentioned in 1637. This had an impact upon the frontage, where the pre-existing Building 14 and an associated alleyway were sealed by a series of dumps. These deposits were then cut through by several postholes and sealed beneath a series of clay floors representing Building 23. There was also a major impact at the rear, where the messuage expanded its plot tail behind the central messuage and became up to 13.0m wide. 

Late sixteenth-century cask-lined Well 38 and timber Building 15 continued in use, but stone-lined Cesspit 15 was backfilled and the southern messuage also gained access to pre-existing stone-lined Well 37. In addition, a new well, Well 41 (Fig. 5.4), was constructed c. 1625–50; this had a rectangular oak baseplate made from four pieces of oak constructed using mortice and tenon joints. The oak

Figure 5.4. Stone-lined Well 41, which was constructed c. 1625–42, showing plan of the oak baseplate ([35603]) and photograph of the well with oak boards in lower fill visible, facing north.
Case study 7: Cesspit 16 incorporating specialist information from Rachel Ballantyne, Richard Darrah, David Hall, Rosemary Horrox, Quita Mould, Mark Samuel, Simon Timberlake, Ian Tyers and Anne de Vareilles

Although constructed in the mid-sixteenth century (see Fig. 4.43), it is the backfilling of this feature that forms the focus of attention here. This event was initially dated to the mid–late sixteenth century on the basis of ceramic and dendrochronological evidence; however, subsequent analysis of the leather assemblage indicates instead an early seventeenth-century date. Overall, stratigraphic and other evidence suggests that the cesspit was most probably backfilled c. 1616–37, when the plot within which it was located was transformed from an inn into a chandlers.

There is no evidence for any primary deposits related to the use of Cesspit 16, suggesting it was scraped clean immediately prior to its backfilling. All the material it contained had been deliberately dumped in a series of rapid episodes. Some of these items indicate contemporary building work was occurring on the plot dominant buildings, while the rest may relate to the disposal of unwanted material from the earlier inn. The building-related material indicates the removal of some timber-framing, which was achieved by sawing off the tenons (Fig. 5.5F). The building timber included an unidentified species other than oak, which was apparently a poor choice as it had been attacked by boring beetles. The timber-framing showed evidence of the use of a 25mm-wide plane, a saw whose kerf (width of cut) was 3mm and an auger. Some discarded, unused poor-quality small wooden pegs were intended to be used in a door or window, suggesting a rebuilding phase.

Two leather shoes are late sixteenth- or early seventeenth-century in date. One was a latchet-fastening welted hobnail shoe with a square toe and a high tongue, from an adult size 2 right foot whose shape, constructional details and style of upper all suggest a date at the end of the sixteenth century (Fig. 5.6A). A second welted shoe with the sole distinctly moulded to take a heel and a piece cut from a tie-shoe quarter with the stub of the fastening latchet present dates to the beginning of the seventeenth century. The shoe has a ‘continuous’ sole that passed down the breast and formed the top piece of the heel and was shaped for the right foot, both features that indicate a date early in the century. Heels were introduced in the 1590s and in order to accommodate them, shoes were made ‘straight’ and not shaped for a left and right foot. While some shoes continued to be made as lefts and rights into the 1620s, ‘straights’ quickly took over (Swann 1982, 7).

A near-complete moulded leather drinking vessel was also recovered (Figs. 4.37B and 5.6B). This type of object is rarely discovered archaeologically, but was common at the time. The majority of known examples are held in museums or private collections and have been preserved as a result of ‘selective curation’, being passed down through the generations. These vessels were made in a range of sizes; the larger known as bombards or beer jugs, the smaller back-jacks or drinking mugs (Waterer 1950, pl. xivb). They were used over a long time span from the medieval period onward, those in wealthy establishments being silver mounted. The vessel is made of two principal pieces, a circular base and a baluster-shaped body with an integral ‘D’-shaped handle, with the body and handle cut from a single piece of leather. A separate strip of leather inside the handle and extending down to the base was added to provide extra support.

The seam has a double line of grain/flesh stitching, one line running along the edge of the body, the other diverging to run along the edge of the handle; a third line reinforces the handle edge. The two sides of the handle are broken and a hole has been knocked into the belly of the vessel. The circular base has the outer edge moulded upward for a distance of 15mm; this has a double row of facet-like stitching, stitch length 14mm, 7mm apart, forming a closed seam joining it to the body of the vessel. The base is moulded upward in the centre. No sign of pitch is visible on the exterior, but solidified droplets

waste, consisting of pegs and dismantled structural timbers. There were five pieces of tangentially sawn oak board with rebates and nails, which originally formed the sides of boxes or drawers (Fig. 5.5A–D). There was also a piece of radially sawn oak panel with a polished face and candle burn mark, which had been reused as a box side (Fig. 5.5E). One board produced an English oak tree ring sequence of 1463–1548 from a tree felled after 1558.

Other wooden items included fragments from least two spoons (Fig. 5.5G–H); their bowls are 69mm long by 56mm wide and 15mm deep, whilst the handles are 8mm in diameter. Similar spoons are known from a late sixteenth–early seventeenth-century feature at Pembroke College (Taylor in Hall 2002, 95), King’s Lynn (Carter 1977, 366), elsewhere in East Anglia (Rogers 2002), York (Morris 2000, 2267–9, 2412) and the Mary Rose (Weinstein 2005, 449–50). There was also a was an apple-corer or cheese scoop made from a sheep metatarsal with its shaft split axially, leaving a cross-section of the marrow cavity, which had some surface polish from use but no decoration. Such items may be a seventeenth-century innovation; the earliest published example appears to be from Norwich and dated c. 1620–50 (Margeson 1993, 120), broadly contemporary with this example.

One 14mm, 7mm apart, forming a closed seam joining it to the body of the vessel. The base is moulded upward in the centre. No sign of pitch is visible on the exterior, but solidified droplets

The seam has a double line of grain/flesh stitching, one line running along the edge of the body, the other diverging to run along the edge of the handle; a third line reinforces the handle edge. The two sides of the handle are broken and a hole has been knocked into the belly of the vessel. The circular base has the outer edge moulded upward for a distance of 15mm; this has a double row of facet-like stitching, stitch length 14mm, 7mm apart, forming a closed seam joining it to the body of the vessel. The base is moulded upward in the centre. No sign of pitch is visible on the exterior, but solidified droplets
Figure 5.5. Wooden objects recovered from the backfilling of Cesspit 16 in c. 1616–37 ([34718]): (A–D) tangentially sawn oak boards with rebates and nails, which formed the sides of boxes or drawers; (E) radially sawn oak panel with a polished face and candle burn mark, reused as a box side; (F) sawn off oak tenon from a rail in a timber framed wall; (G–H) parts of two or possibly three wooden spoons.
Figure 5.6. Leather items from the backfilling of Cesspit 16 in c. 1616–37: (A) adult welted right shoe (134710); (B) drinking vessel (134851) (copyright MOLA, Faith Vardy).
of a wax-like substance are visible on the outer face. The body has a baluster shape, flaring at the foot to encompass the base, expanding at the belly and narrowing to a straight neck. The top edge is broken and the shape of the mouth is slightly distorted. The body is made in one piece with a single vertical, closed seam projecting outward as a flange c. 15mm from the vessel. A simple ‘D’-shaped handle cut in one piece with the body projects from the top half. The body has a single, vertical, closed seam projecting outward as a flange 15mm from the vessel. A separate strip of leather shaped to fit the handle and extending down to the base was placed within the seam as a bead or welt to support and strengthen this potential site of weakness.

A double line of grain/flesh-stitching runs along the closed seam; one runs along the edge of the vessel, the other diverges to run along the edge of the handle. The handle is reinforced with the internal edge of the handle. It is made of cattle hide 4mm thick, its surviving height is 140mm, it is 62–58mm thick with a basal exterior diameter of 75mm and an internal diameter of c. 54mm. The drinking vessel seams have been stitched with a thread, identified by Penelope Walton Rogers as plied ZS (Z-ply, Z-spun, S-ply). The fibres were poorly preserved, but were relatively narrow, 14–20 microns in diameter and arranged in bundles which had occasional longitudinal lines of dark brown tissue; these details suggest a partially processed plant fibre. Thread made from partially processed plant fibre, especially flax (linen), became standard in the stitching of shoes in the Late Medieval period and seem to have displaced animal fibres by the three-eighteenth centuries (Walton Rogers 2003, 3260–1).

Environmental samples from the feature contained few charred plant remains but were rich in waterlogged seeds of food plants that presumably derive from human ccess. These include species that are relatively common in sixteenth-century waterlogged contexts at the site, such as hops, fig, black mustard, blackberry, strawberry, bullace/damson, pear/apple and grape. There were also two more unusual discoveries: cucumber and grains-of-paradise. These suggest that the remains are associated with a relatively wealthy household and the combination of ‘hot’ grains-of-paradise and ‘cool’ cucumbers could indicate dietary balancing of the humours, as was popular until the advent of modern science and medicine (Second pers. comm.).

Cucumbers are known from third-century Roman London (Wilcox 1977) and are mentioned by the English scholar Alexander of Neckham (1157–1217) (Greig 1996, 223), but appear to have died out and were reintroduced in the sixteenth century. They have been recognized archaeologically from a range of sixteenth–eighteenth-century sites including London (Malcolm 1999, 50) and Worcester although they are relatively rare and would have required careful cultivation under glass (Second 2007). Cucumber would have been eaten primarily in the summer, although it could have been pickled for winter consumption.

Grains-of-paradise (Aframomum melegueta) are a West African member of the ginger family. This spice is mentioned in European documents as early as the thirteenth century and became a fashionable substitute for black pepper during the fourteenth–fifteenth centuries; its popularity waned during the seventeenth century (Alsleben 2009, 70, tab. 2; Greig 1996, 227) and it was later used only as a flavouring for sausages and beer. Grains have been recovered from sixteenth–seventeenth-century deposits at London, Worcester (Greig 1996, 227), Taunton and Shrewsbury (Tomlinson & Hall 1996) and are also known from Continental sites (Arndt & Wiethold 1975; de Clerq et al. 2007). The initial importation of grains-of-paradise into Western Europe predates the First Atlantic slave trade, although its greater sixteenth–seventeenth-century archaeological prominence relates to the rise of the Second Atlantic slave trade. The initial Atlantic slave trade of c. 1502–80 consisted primarily of transportation of enslaved Africans to Portuguese and Spanish colonies in South America.

This was eventually replaced by the Second Atlantic system beginning in the 1620s, which was conducted on a larger scale with English, Dutch and Brazilian traders transporting enslaved Africans to Brazil, the Caribbean and North America. Although North America remained a significant focus of English interest, with Jamestown founded in 1607, the most significant area of colonial expansion, commercially at least, was the Caribbean. After several failures, in the early seventeenth century settlements were established in St Kitts, Barbados and Nevis in the 1620s. These islands soon adopted systems of sugar plantations based on slave labour, giving rise to the triangular trade, with much greater archaeological impacts in both the Caribbean (Hicks 2007) and Britain (Brooks 1983; Moore & Corbett 1975) than grains-of-paradise.

The backfilling of Cesspit 16 took place over the course of a few hours or days, yet the ‘back-story’ of the material incorporated in its structure takes us back some centuries. Spatially, many of the finds can be linked to events a few dozen metres away, related to demolition and construction works occurring at the front of the plot, while others link the feature to the Continent and more unusually all the way to West Africa.
adjacent plots they were connected by Wall 4 at the rear which was specific to Plot XIV. Placed in shallow Pit 56 near the northern end of Wall 4 were four carefully arranged horse skulls (Fig. 5.7). These skulls were all derived from mature adult animals (two aged 8 to 12 years and two aged 15 to 25 years), which probably died naturally or were killed as part of normal practices.

The skulls could have been obtained from a nearby slaughterhouse or knacker’s yard. Over 30 horse skulls of broadly the same date were recovered nearby from fills of the King’s Ditch in 1914 (Chapter 3), indicating that they were readily available locally. Even archaeologists of historical periods with a ‘ritual phobia’ (Merrifield 1987, 5) would be hard pressed to argue that this represents rational behaviour. In relatively recent times horse skulls were occasionally used as foundation deposits to protect against evil, fulfilling some ‘vaguely protective function’ (Merrifield 1987, 126, 185) and were typically placed beneath doorways (Wilson 1999, 300). A similar deposit is documented during the construction of the Primitive Methodist Chapel at Black Horse Drove, Littleport, in 1897 (Porter 1969, 181). The centre of the site was marked by a stake, the horse’s head – which had been obtained from a knacker’s yard – was placed in a trench, a bottle of beer opened and a glass thrown onto it, after which bricks and mortar shovelled over as part of an ‘old heathen custom to drive evil and witchcraft away’ (Porter 1969, 181). Horse skulls have been found in a number of other intriguing broadly contemporary contexts in East Anglia (e.g. Hooper 1989). There are also numerous other instances from further afield, such as six horse skulls from the base a seventeenth-century well in Islington that are usually prosaically interpreted as knackered animals but could also have ritual explanations (Pitt with Taylor 2009, 29, fig. 31).

The only archaeological evidence for activity within Plot XIV is a Staffordshire-type slipware bowl that appears to have been
deliberately placed in the bottom of a small hole in the garden, perhaps to form a base of some kind. The plan of 1688 shows a rectangular building on the frontage with a passage or yard to the south, a small narrower building behind with a yard area and to the rear a slightly irregular garden or orchard. This involved an extension that was c. 17m long by 3m wide, covering c. 51 sq. m.

Within Plot XV clunch and brick footings belonging to Building 24 were encountered. These footings spanned the entire width of the plot and the building was at least 3.6m long. There were also traces of brick footings of boundary Wall 5 behind this, which indicate that the plot was c. 31.5m long covering c. 190 sq. m. The 1688 plan depicts a relatively short plot where the front half is entirely filled by the plot dominant building; there is then a small yard and the rear third of the plot is entirely filled by two buildings. Building 24 relates to one or both of these two buildings situated at the rear of the plot.

In Plot XVI stone- and brick-lined Well 42 was constructed in the 1620s; it went out of use c. 1680–8 (see Case Study 8). The abandonment of Well 42 after such a short lifespan relates to the construction of two-roomed slightly sunken red brick Building 25 on the northern side of the plot (Figs. 5.8–5.9), which appears to have

Figure 5.8. Plan of Building 25 constructed in the 1680s, plus photograph facing west.
To the south of Building 25 was a c. 2.0m-wide passageway where stone- and brick-lined Well 43 (Fig. 5.12) was built no earlier than c. 1680. Well 43 had a layer of slate in its base, over which was placed a timber baseplate made of four pieces of oak connected using mortice and tenon joints and consisting of two curved halves of a single branch and two reused straight pieces. Above this was a course of tile, five courses of reused moulded stone blocks and then

been a kitchen block. The larger room measured 7.0m long by 4.6m wide and had a brick floor and a chimney on its southern side. To the rear of this was a smaller room 3.3m wide and 2.5m wide that had a beaten earth floor and a brick-lined rectangular feature with a sloping base set into it. The latter would have housed a timber pedestal for a hand pump (Framework Archaeology 2008, 271–2), indicating that Building 25 was an ancillary kitchen block.

Figure 5.9. Photograph of Building 25 constructed in the 1680s, facing southwest.
Case study 8: Well 42 incorporating specialist information from Richard Darrah, Mark Samuel and Ian Tyers

In Plot XVI stone- and brick-lined Well 42 was constructed in the 1620s in a plot c. 48.5m long covering c. 290 sq. m. Due to its depth, Well 42 had to be investigated in two separate stages in early August and late September 2005. The second phase was undertaken in challenging circumstances due to an abundance of groundwater; this was particularly problematic as it was only at this stage that the fact that much of the stone was intricately moulded was recognized. A timber baseplate was also recovered.
Figure 5.10 (opposite). Stone- and brick-lined Well 42, constructed in the 1620s and backfilled in the 1680s with section of the well, photograph of the timber baseplate, facing north, drawing and in situ photograph, facing north, of oak winding block ([34139]).

At the base of the well was a square timber baseplate. This had been constructed from four pieces of oak slab wood with sapwood present, made from offcuts from the sawing of small beams of c. 8in by 6in (200mm by 150mm) (Fig. 5.10). Placed over the corners of these beams were four smaller pieces of oak, thereby creating an irregular hexagon. One of latter pieces had a sequence of 84 tree rings, which was matched to English oak reference data of

Figure 5.11 (above). Dogtooth-ornamented rear arches from clunch lancet windows of c. 1250, reused in 1620s lining of Well 42 ([34586]) showing: (A) internal elevation (detail); (B) a typical voussoir as recovered; (C) restored scion; (D) restored mullion terminations; (E–F) elevations of dogtooth ornament; (G) settlers’ positioning marks (A–D and G based upon illustrations by Mark Samuel).
1527–1610 and comes from a tree felled no earlier than 1620. Two of the other pieces came from a complete width of tongue-and-groove board; this 202-year sequence matched the Eastern Baltic oak sequence of 1158–1359 and must have been felled after 1367. Felling occurred during the late fourteenth–mid-fifteenth centuries, making the board up to c. 250 years old when it was reused. The condition of the board indicates that it was initially used inside a dry building and its V-shaped tongue-and-groove is typical of much imported oak from the Baltic used in East Anglia. 

Some tiles were placed between the pieces of wood to fill the gaps. Over the baseplate were placed four to five courses of clunch blocks (see Fig 7.2E), with a total of 40 blocks present; these blocks were then in turn surmounted by five to seven courses of brickwork. The stone was derived from a triforium arc and associated lancet window from a high status thirteenth-century religious structure constructed c. 350 years before the well (Fig. 5.11). The lack of weathering and abrasion on the blocks and the coherent and homogenous nature of the group suggest that they come from a building in Cambridge. The deeply carved stone would have been difficult to reuse in most contexts; however it is extremely useful when lining a well as the carving allows the stone to be ‘keyed in’ to the clay. There is evidence that more than one type of arch was employed, but the survival of a paired springer block hints at a row of identical arches in an arcade. This arcade was whitewashed on several occasions, although no attempt to pick out the detail in polychromy was apparent, and the paint indicates that the arcade was free-standing but only to be seen from one side.

The 1688 plan shows a series of buildings stretching from the frontage for c. 39m, with a passageway to the south and a yard behind; it therefore appears that the Building 25 complex was constructed in the 1680s: (A) the stone and brick linings of the well, facing west; (B) the timber baseplate, facing northeast; (C) plan of the constructional sequence of well; (D) the timber baseplate (1343811).
Although there are numerous factors that affect how much water animals require, lactating cattle generally need 50 to 80 litres per day whilst other cattle need 30 to 65 litres. This indicates that there must have been at least one well in Plot XXII located outside the excavated area.

The cattle would have been amongst the heaviest consumers of water in the street block. Working horses require a broadly comparable 45 to 80 litres while pigs only need around three litres, although a sow with a litter can require almost 30 litres. Human requirements are equally low, at two to three litres, while cats, dogs and chickens require negligible amounts. It should also be remembered that the cows and other animals known to have been present in the street block at various times would have required large amounts of fodder and produced large amounts of dung, presumably used as manure, as well as urine.

Figure 5.13. Plan of cattle ADPs 10–12, dug c. 1680–1720.
Figure 5.14. Photographs of ADPs 10–12, which were dug c. 1680–1720: (A) ADP 10, facing north; (B) detail of nearly full term foetus found in womb area of cow in ADP 10, facing north; (C) ADP 12, facing east.
Eighteenth century incorporating specialist information from Steve Allen, Tony Baggs, Rachel Ballantyne, Richard Darrah, Andrew Hall, David Hall, Vicki Herring, Rosemary Horrox, Mark Samuel, Ian Tyers and Anne de Vareilles

Although comparatively few seventeenth-century features were identified, there appears to have been an increase in the 1680s and this pattern of escalation subsequently continued into the eighteenth century (Figs. 5.15–5.17). There was also a substantial rise in the quantity of material culture that was deposited, although this did not occur until the 1760s. No eighteenth-century remains of the King’s Ditch survived to be investigated in 2005–6 and by 1795 the feature had been legislated out of existence (Chapter 3). Nationally, the eighteenth century witnessed the rise of the British Empire, the Industrial Revolution, the American War of Independence and war with France. On a more local scale, although no colleges were founded Senate House was constructed (1722–34), the bridges over the Cam were markedly improved (1754–56) and the University acquired the area to the west of Corn Exchange Street for a Botanic Garden (1762).

Over the course of the eighteenth century the archaeological evidence for occupation within the Grand Arcade street block markedly increased (Figs. 5.16–5.17). A significant component of this increase was an escalation in the number of brick-built structures that were constructed; moreover, for the first time several of these buildings remained standing to be recorded architecturally in 2005, thus providing a valuable source of additional information. Several other brick-built feature-types also appeared during this period, including boundary walls, cellars, soakaways and drains. Their presence does not simply indicate an increase in the visibility of the archaeological remains, but rather an expansion in the levels of activity that were taking place.
Figure 5.16. Plan of all eighteenth-century features within the Grand Arcade street block and adjacent areas.
A similar pattern is also represented cartographically. In the first instance, Loggan’s 1688 plan (Fig. 5.1) provides a good overview of the area at the end of the seventeenth century, while a plan by William Custance of 1798 (Fig. 5.15) provides some evidence of the changes that took place over the course of the succeeding century, although it should be noted that the latter does not represent an entirely reliable depiction.

This period of expansion had a profound impact on the plot dominant buildings at the site, although only a few of these survived to be investigated architecturally. Its influence is much more visible archaeologically in the effective expansion of the plot heads, where a series of plot accessory buildings and other structures were constructed. A densely occupied zone was thus created that extended up to c. 40m from the frontage, rather than the c. 30m which had been typical during the seventeenth century. Despite this, the population of the street block appears to have remained relatively stable, numbering c. 130 individuals in the late eighteenth century. From c. 1760 onwards a further significant component of the archaeological sequence consisted of a number of large assemblages of material culture that were deposited on a scale not previously witnessed, primarily in the backfill of redundant features or as percolation fills in the base of planting beds.

Figure 5.17. Plan of southeastern area of main excavation area at Grand Arcade in the eighteenth century.
The extensive array of archaeological features and material assemblages that pertained to this period, allied with the wealth of surviving documentary and cartographic sources as well as the architectural information that was recovered from contemporary standing buildings, means that more comprehensive tenement narratives can be constructed than were possible during the seventeenth century.

Plots I–VII
The northernmost plots were either not investigated archaeologically or produced no eighteenth-century remains. Evidence from the surviving frontage buildings indicates that many were rebuilt at around this time as two- or three-storey brick buildings with tile or slate rooves, paralleling contemporary developments occurring in the archaeologically investigated area.

Plot VIII
The only eighteenth-century archaeological remains in Plot VIII relate to two rows of planting beds (PBs 7–8) that were dug in the plot tail c. 1770–90 (Fig. 5.18). These features contained some material (MNI 87), mainly linked to dining and tea drinking, which was added as a percolation fill (Fig. 5.18F–M). The upper portions of the planting beds were single continuous trenches, but lower down they were discontinuous and were dug as three or four separate smaller square beds. The westernmost, PB 7, measured 8.0m long and 2.4m wide and contained two 0.5m-deeper sections that were 2.5m by 2.4m and 1.4m by 2.4m in extent. The easternmost, PB 8, measured 8.0m long and c. 1.9m wide and contained some 0.5–0.7m-deeper sections that were 1.1–1.9m long and 1.7–2.05m wide, one of which had a plank and stake revetment. In addition, a number of postholes and irregular shallow features were also present; these were probably for planting bushes. The layout of the planting beds indicates that there was a single garden behind the two plots, although it impossible to determine which frontage property it was associated with or who created them.

Plot IX
Seventeenth-century structure Building 22 went through several phases of rebuilding and extension with red brick foundations (Fig. 5.19A). The messuage was divided into two c. 1778 and it appears that the plot went through a major rebuilding at this time, resulting in the layout depicted in a plan of 1792 (Fig. 5.19B). A large freestanding building, Standing Buildings 42/65, was constructed to act as offices, kitchens and a manufactory, indicating a considerable investment in the property. This may have occurred under the auspices of Francis Tunwell, who leased Plot IX in 1778 and also redeveloped Plot X.

Some of the pottery that was recovered from the demolition deposits of Building 22 is very similar to material from another assemblage possibly linked to Tunwell (see Fig. 5.23G). Part of the late eighteenth-century building complex survived until 2005 in the form of four-storey freestanding Standing Building 42, which was 19m long by 6m wide, and single storey plus basement Standing Building 65, which was 4.5m long by 5m wide (Figs. 5.19–5.20). The two buildings were clearly integral to each other, with access to the staircase leading to the upper floors of Standing Building 42 only possible from a staircase located inside the first floor of Standing Building 65. It seems likely, therefore, that the original function of the basement and ground floors of Standing Building 42 was different to the upper floors, and that there was no direct access route between the two. Standing Building 65 was described as offices in 1792 and 1862, whilst the lower floors of Standing Building 42 were described as kitchens in 1862 and this may well have been their original purpose. The function of the upper floors of Standing Building 42 is unclear, but it may have been some form of manufactory. Overall, the construction of a four-storey building indicates a substantial investment in the plot.

Plot X (incorporating Plot XI)
In the early eighteenth century the frontage of Plot X was subdivided into five separate messages, which subsequently underwent a series of developments. A substantial stable and another structure, which may have been a school associated with the northern message, were added to the rear of the built area in the early eighteenth century (Standing Buildings 28 and 29). At the same time, in the southern message the frontage building was rebuilt and several ancillary structures added. This latter message lost one of its wells in the late eighteenth century (Well 38), although two still remained (Wells 37 and 41) and a planting bed (PB 10) was dug. The most probable candidate for implementing the changes to the southern message was Francis Tunwell, the Christ’s College cook and later a merchant who leased Plot X in 1769. Tunwell was mayor of Cambridge in 1768, 1777 and 1782 and then declared bankrupt by 1784 and was buried in the parish church in 1785 (Gray 1922, 30–1). Tunwell also leased Plot IX to the north in 1778, and may have been responsible for changes seen there.

The buildings at the rear of the complex were associated with the northern message and in 1726 Hugh Naish built a stable here. This was Building 28, which was aligned parallel to the street and measured 8.9m long by 5.0m wide. It contained a small brick-lined soakaway, presumably to dispose of liquid waste. It is likely that the stable originally had a more complex drainage system as well as a feeding trough, hay racks and stall dividers (Connah 2007, 123) that have not survived due to truncation. Modern stabilizing guidelines state that a standing stall should be 3.3m long with an additional 2.0m-wide passage; by these standards the building is slightly too narrow, but not excessively so. As stalls should typically be 1.7m wide, Building 28 could have accommodated five or six horses. To the south of the stables was Building 29, a large structure that measured 9.3m by 6.8m in extent. Its original function is unknown but it was later used as a school.

At some point in the eighteenth century the southern messuage stopped being the Chequer Inn, although it remained the largest of the five messuages. Its frontage building, Standing Building 20, was rebuilt during the eighteenth century; the new structure measured 16m long by 7m wide and consisted of a basement and three storeys. The surviving core of the building had a traditional plan with a range parallel to the street and a short back wing. The street range had a ground-floor side passage at its southern end and a staircase was located in the east end of the back wing. A further structure – Building 30, which was represented by a series brick-built footings – measured 4.6 by 4.8m in extent and possessed a set of external stairs, indicating that the eighteenth-century building complex was originally more extensive. Attached to the rear of Building 30 was brick-lined Drain 1, which led to the rectangular brick-lined Soakaway 1 that collected rainwater from the roofs of Standing Buildings 20 and 30.

In the yard behind Building 30 stone-lined Wells 37 and 41 continued in use, but cased-lined Well 38 went out of use c. 1760–80. The backfilling of Well 38 contained part of an oak lid (Fig. 5.21C; see also Fig. 4.37A). This was not a cask lid as the battens do not go all the way to the side and it may have comprised a specially constructed lid to seal the top of the well. The backfilling also contained leather shoes, a fragment of decorated leather derived from a piece of upholstery or other furnishing (Fig. 5.21A; see also Fig. 4.37C–D), a knife (Fig. 5.21B), a dog, bones from a mixture of leather-working and food waste plus part of a horse. Immediately after the well’s backfilling, PB 10 was dug. This feature included a percolation fill that contained a range of material (MNI 52) including ceramics largely linked to dining, animal bone consisting of leatherdresser’s and kitchen waste plus human cess.
Figure 5.18. PBs 7–8, created c. 1770–90, plus material deliberately added to the initial percolation fill (lower) and deposited during abandonment c. 1800–20 (upper) showing: (A) Late Unglazed Earthenware yellow flowerpot with rolled rim ([50245]); (B) Late Unglazed Earthenware red flowerpot with collared rim ([50244]); (C) Late Unglazed Earthenware yellow flowerpot with rounded rim ([50958]); (D) lead planting label, with the number 14 on one face ([50837]); (E) lead planting label, with the number 4 on one face ([50837]); (F) lead planting label, with the number 26 on one face ([51112]); (G) lead planting label with the number 80 on one face, which has apparently been deliberately bent over ([51112]); (H) photograph of PB 7, facing west; (I) Chinese Export porcelain plate with blue hand-painted floral and bamboo decoration, c. 1740–50 ([50186]); (J) Westerwald stoneware vessel, probably a chamber pot ([50186]); (K) Staffordshire white salt-glazed stoneware dish or large plate with dot with diaper and basket pattern rim ([50193]); (L) creamware tea or coffee pot lid with blue hand-painted decoration ([50186]); (M) creamware dish or deep plate with Royal pattern rim, with a drilled hole from a repair ([50186]).
Figure 5.19. *Standing Buildings 42 and 65, plus Building 22: (A) the surviving standing buildings in 2005, plus below ground remains; (B–C) plans of Plot IX in 1792 and 1862 (plans B–C courtesy of the Master and Fellows of Jesus College Cambridge).*
Plot XII

In the large rear garden area of Plot XII limited evidence of a few minor structures was encountered (Buildings 27, 28, Wall 8) plus a planting bed (PB 9). Seventeenth-century Gully 27 went out of use in the mid-eighteenth century. Its backfilling contained at least five clay tobacco pipes of c. 1740–80, including one manufactured by James Kuquit (active c. 1718–50) (Fig. 5.22A). Some gravel footings indicate that there was a lean-to structure situated behind Building 28 (Building 27), while the brick-built footing of Wall 8 indicates that it was either a freestanding wall or part of a small structure. There
Figure 5.21. Material recovered from the backfilling of Well 38 in c. 1760–80: (A) leather sheet fragment with stamped and tooled decoration, including a stamped fleur-de-lis motif in lozenges ([35392]); (B) iron whittle-tanged knife ([35392]); (C) oak lid ([35419]).

Figure 5.22. Eighteenth-century material recovered from Plot XII: (A) type 10 clay tobacco pipe bowl of c. 1700–40 with initials IK on spur from Gully 27 ([32448]); (B) lead planting tag with the number 34 on its head, which has had notches pushed through it; found in association with a clay tobacco pipe bowl of c. 1730–80 ([31477] F.3296); (C) lead planting tag with the letter I on one side and number 16 on the other with line decoration; found in association with eighteenth-century pottery ([31427] F.6644).
Chapter 5

Plot XIII

In 1723 Plot XIII was leased to Michael Headley, a tallow chandler and grocer, who appears to have been responsible for a phase of rebuilding including the construction of a well and two buildings in the plot head, plus the construction of a large building in the plot tail and substantial boundary walls. In the first instance, stone-lined Well 45 (Figs. 5.24–5.26) was constructed in the plot head in a c. 2.3m-wide alleyway that lay to the south of the plot dominant building. Well 45 had a timber baseplate made of Norwegian Scots.

Figure 5.23. Material recovered from the percolation fill of PB 9, dug c. 1760–80 ([32022]): (A) free blown squat cylindrical light green glass utility bottle with very thick patina, high rounded base kick with disc pontil scar and single applied collar below the lip, of c. 1750–60; (B) colourless free blown cylindrical glass phial with thin patina; (C) light green free blown conical glass phial; (D) rounded oval seal with part of body/neck of green free blown utility bottle, marked [PYRMONT] WATER around crowned shield with coat of arms; (E) Staffordshire white salt-glazed stoneware vessel, probably a sauce boat with seed pattern decoration on body; (F) Staffordshire white salt-glazed stoneware plate with ‘barley’ pattern rim and clearly visible still marks from firing; (G) English tin-glazed earthenware pedestalled bowl with decorated with a stylized leaf (Archer 1997, 179) on the inside of the base, probably an early–mid-eighteenth-century London product; (H) type 12 clay tobacco pipe bowl of c. 1730–80 with Wyer-style decoration of S WILK / INSON / Cambg.

was also an oval or rectangular planting bed, PB 9, which was dug c. 1760–80 and possibly relates to the merchant Francis Tunwell. The percolation fill in its base (MNI 59) consisted mainly of glass bottles, principally for wine (Fig. 5.23A), but at least one contained imported mineral water from Pyrmont in Lower Saxony (Fig. 5.23D) which was popularized in England by George I (r. 1714–27), plus clay tobacco pipes (Fig. 5.23H) and coffee bowls. Two planting labels from ‘garden soil’ deposits attest to late eighteenth-century gardening activity (Fig. 5.22B–C).
Figure 5.24. Photographs of stone-lined Well 45, which was constructed c. 1723: (A) backfilling, facing north; (B) stone-lining, facing south; (C) timber baseplate, facing south; (D) timeline of the well and the elements that it was constructed from.
Figure 5.25. Timber baseplate from stone-lined Well 45 ([34897]), constructed c. 1723: (A) the lower course of timber baseplate; (B) the upper course of timber baseplate; (C) reconstructed original board, which was used to form three boards in the baseplate.
Figure 5.26. Stone mouldings from windows reused in stone-lined Well 45 ([34897]), constructed c. 1723: (A)–(E) mullioned and possibly transomed domestic Clunch window of c. 1570–1600 showing: (A) plan of lower light; (B) external elevation of window; (C) reversed plan of upper light of window; (D) transverse sectional elevation of window; (E) restored mullion moulding of window; (F)–(J) Barnack stone sill from domestic window of c. 1570–1640: (F) recut stone, showing original thirteenth-century moulding in red; (G) restored central mullion moulding of window; (H) restored plan of sill showing partial fixed glazing of window; (I) restored elevation of sill of window; (J) transverse sectional elevation of central light sill of window (based on illustrations by Mark Samuel).
pine felled after 1714 (Fig. 5.25) and its lining was composed of around 12 courses of reused moulded stone (c. 170 stones). This included blocks from two domestic windows of c. 1570–1640, which themselves reused thirteenth-century stone mouldings, and another piece of a thirteenth-century window (Fig. 5.26). One possibility is that these blocks derive originally from the nearby Dominican Friary (founded c. 1221–38) and were reused as part of a plot dominant building of Plot XIII constructed in the late sixteenth or early seventeenth century after the plot was acquired by Emmanuel College, which occupied the former site of the Dominican Friary in 1585.

On the northern side of the plot head two buildings were constructed. Firstly, stretching back up to 21m from the frontage were the fragmentary brick-built footings of Building 31, which measured 6.6m wide and c. 12.8m long. Abutting the rear of this structure were the brick-built footings and floor of small two-roomed Building 32, which measured 1.8m long by 1.55m long. Buildings 31 and 32 formed the rear elements of the plot dominant building complex; their eighteenth-century function is unknown, although by the later part of the nineteenth century they comprised a kitchen plus office block and counting house respectively. Coeval with their construction a brick-built boundary wall – Standing Building 105 – measuring 9in wide and 25 courses (c. 4ft) high with supporting pilasters, was constructed between Plots XI and XIII. Associated with the boundary wall were Drain 2 and brick-lined Soakaway 2 (see Fig. 5.46).

In 1744 a workhouse in the yard was mentioned for the first time. No trace of this structure survived archaeologically, but it can be correlated with a rectangular building depicted on a plan of c. 1815 that measured 67ft (20.4m) long by 16ft (4.9m) wide and was divided into two rooms with some internal features, possibly fireplaces. Behind this another boundary wall, Standing Building 110, separating Plots XIII and XIV was constructed; this also measured 9in wide and 4ft high, with a wider (14in) return to the south at its western end. The Headley family continued to lease the plot for the rest of the eighteenth century; the only archaeological feature associated with their occupancy was Pit 57 (see Case Study 9).

**Plot XIV**

In the eighteenth century a considerable amount of building work occurred at the front of Plot XIV, including a well of c. 1761 (Well 46), a cistern (Cistern 1) and a planting bed (PB 11) in the garden area behind. The plot dominant building was rebuilt c. 1730; it was described by the RCHM(E) (1959, 333, no.167) and was destroyed by fire in 1969, although the façade either survived or was recreated (see Fig. 5.30). Standing Buildings 22–24 were described by Pevsner as ‘a nice early eighteenth-century group, especially pleasant No.24 [Plot XIV] with keystone on the front’ (2001, 246–7). A set of substantial ‘H’-shaped brick footings, located at the rear are for a fireplace and chimney (Building 33). In the garden two substantial brick-lined features were constructed. The first, Well 46, was built c. 1761 with a baseplate made from wood felled in 1760 and was unusual in having a rectangular upper section and arched top with a circular shaft (see Case Study 10).

There was also rectangular Cistern 1, which had an arched roof fed by brick-lined Drain 3. Slightly later, c. 1770–90, PB 11 was dug (Fig. 5.28A); possibly in association with a widow named Mary Ward. This consisted of a steep-sided, flat-bottomed rectangular trench with rounded ends that measured 4.45m long by 0.85m wide and over 0.65m deep. A considerable quantity of material

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**Case study 9: Pit 57 incorporating specialist information from Craig Cessford and Andrew Hall**

Pit 57 was initially recognized as a discrete ‘cluster’ of material duringmachining of the garden soil. Whilst no cut could be identified, it is assumed that the assemblage was contained within a small pit, although it is possible that it instead comprised the percolation fill of a small planting hole. The material appears to have been deposited c. 1760–80, when Plot XIII was occupied by the Headley family of grocers who resided there for around 90 years c. 1723–1815. The assemblage consisted almost entirely of pottery (MNI 18) plus a clay pipe (MNI one); in contrast to most late eighteenth-century assemblages, vessel glass and animal bone were conspicuous by their absence. The majority of the material appears to consist of some of the personal crockery belonging to Peter Headley and his wife/widow Frances, and its deposition was possibly related to the death of Peter in 1768. The group is not large and suggests _ad hoc_ small-scale clearance of vessels that were no longer wanted, either because they were damaged or no longer fashionable.

The pottery (64 sherds weighing 1960g, MSW 30.6g) had an EVE of 4.55 (EVE per MNI 0.25) and was dominated by dining wares, consisting of plates (MNI five) (Fig. 5.27A–E) and bowls (MNI three). Tea and coffee drinking was also represented by tea bowls (MNI three), saucers (MNI one), a Sparrowbeak jug (MNI one) (Fig. 5.27F) and a coffee cup or can (MNI one). Tea drinking vessels included two pieces of English soft paste porcelain; a saucer (Fig. 5.27G) plus a tea bowl with a Chinoserie pattern that was manufactured in Worcester or Liverpool. A Chinese export porcelain coffee cup or can had Imari style decoration of c. 1710–30 (Fig. 5.27H), making it 30 to 70 years old when it was deposited and significantly older than the other material (none of which is likely to predate c. 1750). This material predates Peter and Frances Headley’s occupancy and may have been inherited from Peter’s uncle Michael Headley. There were substantial proportions of two chamber pots related to hygiene, one a piece of Westerwald stoneware from Germany decorated with floral roundels (Fig. 5.27I), the other a piece of tin-glazed earthenware with scenic decoration (Fig. 5.27J). A Nottinghamshire/Derbyshire stoneware jar would have been used for food storage and preparation. The clay tobacco pipe bore the stem mark of Samuel Wilkinson (active 1762, died 1787); the bowl can be typologically of c. 1730–80 and 115mm of stem survives, indicating rapid deposition (Fig. 5.27K).

Although the Headley family occupied Plot XIII for around 90 years and can be linked to a number of structural developments, there are only two assemblages that can potentially be linked to their occupancy, the other being Soakaway 2 of c. 1813–23 (below). The grocery business was run by a succession of at least seven individuals, so the fact that only two associated assemblages were recovered indicates how most of their occupation has left few material traces.
Even these two groups are biased as they represent material deliberately selected for discard, probably a combination of damaged or chipped vessels and other pieces that were deemed too old-fashioned. This is apparent by the relative predominance of fabrics as it is likely that the dining and tea drinking vessels used by the Headley family at this date were dominated by creamware or possibly even pearlware, yet the vessels recovered are dominated by the old-fashioned Staffordshire white salt-glazed stoneware (MNI eight) with some creamware (MNI three) and no pearlware; it is likely that two-thirds of the deposited ceramic vessels (12 out of 18) were no longer current.

Figure 5.27. Material recovered from Pit 57 of c. 1760–80 ([40408]): (A–B) Staffordshire-type white salt-glazed stoneware plates with ‘bead and reel’ pattern rims; (C) Staffordshire-type white salt-glazed stoneware plate with ‘barley’ pattern rim; (D) creamware plate with spearhead pattern rim; (E) English tin-glazed earthenware plate with simple floral or geometric decoration; (F) creamware sparrowbeak jug with hand-painted blue decoration showing oriental scene, of c. 1760–70; (G) English soft paste porcelain saucer with hand-painted blue cannonball pattern decoration with some old damage apparent, probably produced at Worcester; (H) Chinese Export porcelain coffee cup or can with Imari decoration, of c. 1710–30; (I) floral roundel from Westerwald stoneware chamber pot of c. 1740–60; (J) English tin-glazed earthenware chamber pot with hand-painted blue scenic decoration, probably produced in London; (K) type 12 clay tobacco pipe bowl of c. 1730–80 with Wyer-style decoration of S. WILK / INSON / Camb.
was introduced into its base to act as a percolation fill (MNI 60); this included quantities of ceramics mainly linked to dining and tea drinking (Fig. 5.28B–K), a considerable quantity of animal bone and some other material including a perfume bottle of Richard Warren of London. The animal bone mainly comprised domestic food refuse, which was dominated by mutton plus some beef, venison, rabbit, chicken, goose, duck and pigeon, but also included bones from a newborn pig suggesting that these animals were being raised in the plot.

**Plot XV**

During the early/mid-eighteenth century the frontage building in this plot was constructed, a well and two soakaways were built and an ancillary structure that appears to have formed a washhouse or laundry was appended. The frontage structure, Standing Building 23, had a basement and four storeys (Fig. 5.30). The eighteenth-century portion of the building had front and back ranges which both extended over the full width of the property. Between them a staircase ran from the basement to third floor, while a second service staircase occupied a slightly later turret (Standing Building 106). Some eighteenth-century full-height panelling survived, as well as other original features, and part of the building's constituent timber-framing was recorded (Fig. 5.31).

To the rear of Standing Building 23 was a smaller structure, Building 34, which had brick-built footings that extended 19m from the frontage. In the passageway on the very northern side of the plot lay brick-lined Well 47; given its location, it could potentially have supplied water to Plots XIV and XV. Two rectangular brick-lined Soakaways 3–4 were inserted into the southern side of seventeenth-century Building 24 (Fig. 5.32A–B). One of the pair, Soakaway 4, had a relatively short lifespan and was backfilled c. 1780–90. Its infill did not contain a great deal of domestic material (MNI 13) but finds included a spills vase, a chamber pot with the initials GR for George III (Fig. 5.32D), which probably refers to George III (c. 1760–1820), and a glass bottle (Fig. 5.32C). The second, Soakaway 3, is discussed further in Case Study 12. Behind Building 24 narrow structure Building 35 (Fig. 5.32A), which ran the width of the plot, was also added during this period. Building 35 was divided into two by a relatively insubstantial internal wall and had a series of drains and related features in its northern half. These soakaways, drains and related features suggest that the plot tail buildings

**Figure 5.28** (opposite). PB 11, which was dug c. 1770–90, including the ceramics recovered from its percolation fill (130200): (A) photograph of the planting bed, facing south; (B–C) Staffordshire white salt-glazed stoneware plate with ‘barley’ pattern rim; (D) plain straight-sided Staffordshire white salt-glazed stoneware quart tankard with incised lines around the rim and base; (E) Queen’s shape creamware plate; (F) feathered-edge creamware side plate; (G) small creamware bowl with fluted body; (H) small plain creamware bowl with rolled over rim, probably for tea drinking; (I) small plain Staffordshire white salt-glazed stoneware bowl with rolled over rim, probably for tea drinking; (J) Late Glazed Red Earthenware flaring bowl with two horizontal side loop handles; and clubbed rim, glazed internally and externally; (K) Late Glazed Red Earthenware jar with clubbed rim, glazed externally.

were used for some purpose that necessitated relatively large-scale water usage.

**Plot XVI**

A considerable amount of building work was conducted in Plot XVI during the early/mid-eighteenth century, affecting both the frontage building and the plot accessory structures to the rear. Plot dominant Standing Building 24 was constructed in the early/mid-eighteenth century; it was of three storeys with a rear attic (Fig. 5.30). It also possessed a street range, which included the staircase, and a back wing with a few surviving original internal features. To the rear of the building a stretch of eighteenth-century boundary wall between Plots XV and XVI survived; it was 35 courses (7ft) high and had a return to the south at its western end. Behind this the existing Building 25 was heavily altered. Its main room had several walls inserted, which subdivided it into four spaces and meant that the chimney was no longer in use, and there were also a number of internal features. Deposits associated with this phase included bone from a range of meat joints and a small amount of leatherdressers’ waste.

It appears that after these alterations Building 25 no longer functioned as a kitchen, although its new role is unclear. Several additional cellars and rooms were also constructed at this time, connecting Building 25 to the plot dominant building on the frontage making this a continuous range of buildings. One of these, Cellar 5, employed reused pieces of stone moulding derived from a relatively high-status building of c. 1250–1400. Immediately behind Building 25 lay Cellar 6, while further back Wall 12 (see Fig. 7.21) was constructed to separate off the plot tail. Behind this were two further relatively insubstantial structures, Buildings 36–37, which were represented archaeologically by rubble-filled linear footings that originally supported timber sill beams.

In c. 1780–90 Cellar 6 was backfilled. The material that was deposited at this time represents the largest discrete late eighteenth-century assemblage from the site (MNI 123) and included pottery (Fig. 5.33B–D) mainly linked to dining and gardening, plus glass including two complete bottles (Fig. 5.33E–F) and animal bone. Some neonatal bones indicate that pigs were being raised on the plot. Four cats were also disposed of in the cellar and there were a range of birds. At the same time much of Building 25 appears to have been used as a coal store as a substantial layer of coal dust containing a copper alloy triangular plate (Fig. 5.34B) accrued upon its floor.

**Plot XVII**

The frontage building of Plot XVII, Standing Building 25, consisted of three storeys and a basement. It was eighteenth-century in date, although most of the surviving eighteenth-century structural elements and fittings were limited to the rear wing and stairwell area. The underlying eighteenth-century structure originally had a street range and a back wing, which were separated by a staircase. Behind this seventeenth-century Well 44 and Building 26 continued in use, whilst in 1794 the rear of Plot XVIII was annexed as a ‘necessary house’.

**Plot XVIII**

In the mid–late eighteenth century a phase of building occurred in the tail of this plot. This included brick-built dividing Wall 13 which had brick and stone footings, brick-lined Cellar 7 and square brick- and stone-lined Cesspit 17 (see Fig. 7.2K). These changes may reflect the plot’s transition from an inn, known as the White Lyon (1726) and the Boar’s Head (1775), to a private residence by 1789.

**Plots XIX–XXI**

The only surviving archaeological remains in Plot XIX comprised a few fragmentary footings belonging to Wall 14; however, until the 1970s the southern part of the plot consisted of a ‘little changed’
Case study 10: Well 46 incorporating specialist information from Richard Darrah and Ian Tyers

Brick-lined Well 46 had a baseplate constructed of two curving and two straight sections of oak, which were produced by a combination of sawing and hewing (Fig. 5.29B–D). The curving pieces came from a 1.5m long section of a 60-year old branch, which had its curved sides hewn before being sawn down its length into two halves. The straight pieces came from two different oak trees; one produced a 59-year tree ring sequence dated to 1702–60 inclusive.

Figure 5.29. Brick-lined Well 46, constructed c. 1761: (A) photograph of the arched top, facing northwest; (B) photograph of the timber baseplate, facing north ([35499]); (C) section; (D) timber baseplate ([35499]).
by reference to English tree-ring data. This timber retained full sapwood and bark-edge, so the tree was felled in the winter of 1760. There is no evidence for re-use and as a halved log it is likely that it was sawn or selected specifically for this purpose, so the well was constructed in 1761 or soon after.

The four pieces of timber were connected by mortice and tenon joints, fastened by ash pegs. This relatively ad hoc use of material and traditional timber-framing techniques is similar to seventeenth-century well baseplates and differs from some eighteenth-century examples which used iron nails and boards purchased specifically for this purpose. The 1.45m-diameter brick-lined shaft was built from a range of brick fabrics and was not mortared together. Around 1.6m up the brick-lined shaft, two squared sawn alder beams were set into holes between the bricks; these beams do not appear to have served any purpose other than to form a platform during construction. The uppermost part of the shaft broadened out to form a rectangular box measuring 1.6m by 1.3m in extent with an arched roof. A relatively small hole in the brickwork on the south-western side of this box indicates that the water was obtained through a lead pipe, which was eventually removed when Well 46 went out of use. The well shaft was never backfilled and there is no clear evidence for when it went out of use; it almost certainly continued to function throughout most of the nineteenth century and possibly survived until a reorganization of the plot c. 1924–40.

four-storey building with basements of c. 1750 that was split into two houses, each with a front room used as a shop from an early date (Grey 1972, 20). By 1771 this part of the plot consisted of two houses with five cottages at the rear. Plot XX continued to be the Birdbolt Inn, lessees of which included Jonathon Pink (1750–5) who had some tin-glazed earthenware plates made, probably in London, that were marked Pink at the Birdbolt (Fig. 5.34A). The extensive and impressive nature of this late eighteenth-century coaching inn is indicated by a plan of 1792.

Plot XXII

From 1723 onwards the investigated area of Plot XXII formed the rear portion of the Cock Inn. In the first half of the eighteenth century the plot was completely enclosed by substantial brick walls. The footings of one of these, Wall 10, contained a heterogeneous assemblage including large quantities of stone blocks derived from a medieval religious building plus earlier and later material. The overall impression of the reuse of unwanted reclaimed material from a builder’s yard. Later in the century a cellar (Cellar 4), a timber-lined pit (Pit 58) and a building (Building 38) were constructed.

A series of three intercutting pits, ADPs 10–12, dug in the north-eastern corner of the plot may date to the either the late seventeenth or early eighteenth century; they have already been discussed above (see Figs. 5.13–5.14). Around 1720–50 Plot XXII was enclosed by substantial brick-built Wall 10 along its northern side; this connected to the pre-existing eastern boundary, Wall 4, of Plot XIV, which was itself extended southwards behind Plot XV and probably further. The lowest foundation course of Wall 10 consisted of large quantities of reused stone mouldings (Figs. 4.64 and 5.35–5.36). This was a heterogeneous group that had not been reshaped at all for reuse; the stones were simply placed in position and had mortar poured around them. The stone consists largely of pieces that were awkwardly shaped for reuse; they effectively represent the residue left after more useful building material has been removed. The bulk of the stone derived from a fourteenth-century religious building, but there was also some late twelfth-/thirteenth-century material and a few later pieces, one of which is no earlier than c. 1680.

Taken as a group the moulded stone could derive principally from a religious institution that originated in the twelfth century and where there was a major phase of fourteenth-century building, plus some later material. One possibility is that this material derives from the church of St Andrew the Great, which was rebuilt in the mid-seventeenth century (Chapter 6). Unfortunately, the few depictions of the church that pre-date this rebuilding are too generic to determine enough detail to confirm this hypothesis. If the more useful stone was reused in the rebuilding of the church this would mean that the residue of less useful pieces remained unused for perhaps 75–100 years. The more recent pieces presumably represent accidental breakages, which were added to the existing collection of stone fragments. It is also possible that the material derives from elsewhere, although there are no particularly obvious candidates. There was some demolition of existing buildings at nearby Emmanuel College in the early eighteenth century, but Loggan’s 1688 print indicates that these all post-dated the foundation of the College in the 1580s. Above the reused stone the wall foundations were made of brick, many of which also appear to have been reused as they were sloop-moulded and this technique had been replaced locally during the sixteenth century. The construction of the boundary walls around the plot represents a relatively large investment and indicates a shift in function towards more intensive usage of the space.

In the mid-eighteenth-century another boundary, Wall 11, was built along the eastern perimeter of the property just inside the earlier Wall 4. At the same time rectangular brick-lined Cellar 4 (Fig. 5.37), which measured 2.45m (c. 8ft) long by 1.45m (c. 4ft 9in) wide and over 1.2m deep was constructed. Located in the north-eastern corner of Plot XXII, this cellar incorporated a few pieces of reused medieval stone into its fabric. This cellar was cut down though the garden soil until the natural gravel was reached, partly truncating one of the buried cows (ADP 10). No floor was laid in the cellar; instead the firm natural gravel surface provided a base. The function of Cellar 4 is unclear. There is no evidence for any particular entry point into it and it would not have made a useful place to undertake activities. It may have provided storage space, albeit rather damp, or it could be that the activity in the building above required substantial air circulation under the floor. To the south-southeast of the cellar was located rectangular Pit 58. This measured 1.5m by 0.75m in extent and c. 0.8m deep with vertical sides, indicating that it was originally plank-lined, and a flat base with a step in one end. In the late eighteenth century Building 38 was constructed; only one wall foundation of this structure had survived. It was built from brick and employed some reused stone mouldings.

All of the above features relate to the Cock Inn, which was referred to in documentary sources from 1723 onwards. By 1798 the area was more built over than in 1688, with several substantial groups of buildings. The archaeologically investigated area of this plot lay at the end of a clearly defined lane with a dog-leg kink that ran from St Andrew’s Hill. Building 38 represents the eastern wall of a large building on the northern side of the lane that is shown on the plan of 1798 (Fig. 5.15). Cellar 4 is not depicted on this plan, perhaps because the structure it formed a part of was not substantial enough to be included. Between 1753 and 1782 Plot XXII was owned by the Gibbons family, before passing into the hands of the Purchas family between 1782 and 1829.
Figure 5.30. Elevation plus photograph, facing southwest, of the frontage of the ‘nice early eighteenth-century group’ Standing Buildings 22–4.
Figure 5.31. The timber-framing of Standing Building 23.
Figure 5.32. Mid-eighteenth-century Soakaways 3–4 in Building 24, plus material from backfilling of Soakaway 4 c. 1780–90: (A) photograph of area, facing southwest; (B) photograph of Soakaways 3–4, facing west; (C) free blown cylindrical black glass utility bottle with thick patina, medium rounded base kick with glass tipped pontil scar and single applied collar below the lip, of c. 1780–1810 ([32702]); (D) scratch blue chamber pot with the initials GR (Georgius Rex) surmounted by a crown within a roundel ([32702]).
Figure 5.33 (above). Material recovered from the backfilling of brick-lined Cellar 6 in c. 1780–90 ([32651]): (A) hollow cone-shaped pipeclay ‘finial’ with a ball on top of unknown function; (B) octagonal creamware serving dish or tureen stand with moulded diamond pattern decoration around edge; (C) Staffordshire white salt-glazed stoneware serving dish with ‘bead and reel’ pattern rim; (D) English tin-glazed earthenware storage jar or galley pot, of c. 1700–50; (E–F) two free blown cylindrical green glass utility bottles with patina. One has a high rounded base kick with disc pontil scar and long slender neck with single applied collar below the lip, of c. 1780–1820. The other has a high pointed base kick short body and neck and a single applied collar below the lip, of c. 1780–1820.

Figure 5.34 (right). Miscellaneous eighteenth-century items: (A) English tin-glazed earthenware sherds from plates marked Pink at the Birdbolt produced for the landlord Jonathon Pink, reconstructed from three sherds from separate vessels (originally recovered in 1905: see Hughes 1915, 425; (B) triangular copper alloy plate with drilled holes, probably a tool of some kind such as a leather worker’s palm-guard, from Building 25 ([32692]) (photograph A courtesy of the Fitzwilliam Museum).
Figure 5.35. Wall 10 constructed c. 1720–50, with composite photograph of reused moulded stone in footings ([40123]), facing north, and view of wall recording, facing east, and timeline of reused stone.
Figure 5.36. Reused stone from footings of Wall 10 (f40123) constructed c. 1720–50: (A) chamfered beak of Barnack stone of c. 1180–1270; (B–D) elevation and plan of parapet crenellation with wider coping made of Weldon stone c. 1350 with: (B) elevation showing surviving elements; (C) plan showing surviving elements; (D) coping moulding; (E–G) Ketton stone cyma reversa cornice of c. 1560–1800, showing: (E) composite section of moulding; (F) restored elevation detail; (G) moulding employed as string course; (H–J) Oolitic limestone Norman engaged column base with intermediate reuse as a cyma recta cornice c. 1560–1750, showing: (H) weathered moulding as found; (I) elevation detail; (J) reversed plan showing ?primary Romanesque angle shaft (red); (K–L) Ketton stone gravestone of c. 1680–1800 showing surviving fragments and partial reconstruction of elevation (K) and section (L) (based upon illustrations by Mark Samuel).
Standing buildings or else as substantial below-ground foundations. The quantity of material being deposited within discrete feature groups – a practice that had first emerged in the 1760s – also escalated. This increase in archaeological remains (Figs. 5.38–5.39) also coincided with a significant expansion in the quantity and quality of the associated documentary and cartographic evidence, although multiple occupancy and a high level of population mobility, both common features of nineteenth-century urban centres (Pooley 1979) do somewhat hinder attempts to link archaeological material to specific households. Nevertheless, the variety of newly available sources – which include in particular census returns and trade directories – provide a previously unparalleled level of detail. So much so, that, by the middle of the nineteenth century, there is if anything a surfeit of information. Asa Briggs has argued that it is ‘tempting in considering Victorian things to treat them entirely archaeologically’ (1988, 16) and whilst that approach will not be adopted here, it is important to introduce a greater degree of selectivity with

**Nineteenth century** incorporating specialist information from Steve Allen, Tony Baggs, Rachel Ballantyne, Richard Darrah, Andrew Hall, David Hall, Vicki Herring, Rosemary Horrox, Mark Samuel, Ian Tyers and Anne de Vareilles

In many respects, the nineteenth century represents the period of greatest change to have occurred within the Grand Arcade street block since occupation first commenced in the eleventh century (Figs. 5.38–5.40). Moreover, this pattern was replicated all cross the Barnwell Gate suburb. The area as a whole underwent massive redevelopment, becoming largely built over and – for the first time – fully urban in character. Contributing to this transformation was the fact that the King’s Ditch no longer existed as a discrete entity; infilled and sealed over, its former course was now followed by Tibb’s Row (Chapter 3). Across the suburb the degree of building coverage, or proportion of the area covered by buildings (Conzen 1968, 123), rapidly expanded; at Grand Arcade many of the resultant structures survived to be recorded in 2005–6, either as

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**Figure 5.37.** Mid-eighteenth-century Cellar 4: (A–B) photographs of cellar, facing west and north respectively; (C) Plot XXII as depicted in a plan of 1798.
The planting beds were abandoned, and a large quantity of material was probably due to a redevelopment that occurred prior to 1824. When In this plot, the Office Terrace and eight small plots at the Blue Lion Yard, new plots were created through subdivision, including four on Post Office Terrace and eight small plots at the Blue Lion Yard. All heavily developed during the nineteenth century and several plots linked to Tibb’s Row are discussed elsewhere (Chapter 3). Plots I–VII were nineteenth-century remains, while a series of tail-end plots linked to the Robert Sayle premises in 1851 and around this time some domestic debris was deposited in Pit 68 (MN 39). The final stages of Plot IX as an independent entity are depicted on a plan of 1862.

**Plot IX**

By the early nineteenth century Plot IX had been divided into two frontage plots, while the garden area to the rear had been amalgamated with the garden behind the plots to the south. In 1814 the southern plot was described as ‘a capital brick-fronted house with a parlour, a good sized drawing room and several bedrooms’. These plots became part of the Robert Sayle premises in 1851 and for vehicles and retained a significant proportion of open space; the only pre-existing example of this type was Plot XIII, which continued to develop successfully as a grocery business. In the nineteenth century this was joined by Plot XVII, which the Barrett family of ceramic retailers successfully expanded. The shorter, and commensurately smaller, plots that had no rear access were less easily developed, although it was still possible to exploit these. Examples of this include a photographic studio that was established in Plot X and a densely packed group of houses in Plot XIX.

Overall, the wealth of archaeological, architectural, documentary, and cartographic information that is available for this period means that the nineteenth-century tenement narratives are the most complete – in terms of both range and nuance – of any century in the site’s millennium-long history. A wealth of additional material can also be found within the associated digital-only volume. Excluded from the following discussion is the Robert Sayle department store, as its mid-nineteenth–twentieth-century development will be related separately (see below).

**Plots I–VII**

The northernmost portion of the street block, including Plots I–VII, was either not investigated archaeologically or produced no nineteenth-century remains, while a series of tail-end plots linked to Tibb’s Row are discussed elsewhere (Chapter 3). Plots I–VII were all heavily developed during the nineteenth century and several new plots were created through subdivision, including four on Post Office Terrace and eight small plots at the Blue Lion Yard.

**Plot VIII**

In this plot, late eighteenth-century PBs 7–8 went out of use c. 1800–20, probably due to a redevelopment that occurred prior to 1824. When the planting beds were abandoned, a large quantity of material was deliberately dumped into them (MN 109). Most of this assemblage was gardening-related in nature. It included 67 flowerpots (see Figs. 5.18A–C and 7.2P), two saucers and nine lead planting labels (see Fig. 5.18D–G). An iron frog and trowel may have been gardening tools and some window glass and came may come from a greenhouse. The disposal of so much material, particularly flowerpots, not affected by the vagaries of fashion suggests that this represents the end of intensive gardening in this plot (see also Cessford 2014b, 259). In 1856–60 Robert Sayle took over the plot, using most of it for his drapery business (see below), while the rear portion was carved out to become tail end plot 4 Tibb’s Row (Chapter 3).

**Plot X**

By the early nineteenth century, there were five separate buildings along the frontage of Plot X. In 1814 the northernmost building comprised a ‘substantial very well built residence’ with two good parlours, a drawing room, seven bedrooms and servants’ rooms. This plot utilized Building 28, which was a stables by 1862, and Building 29, which was converted to a coach house soon after 1814. Brick-lined Well 48 was constructed by 1814; somewhat unusually it had no timber baseplate and it may have been a communal feature, located in a ‘back room’ accessible from several of the frontage plots. The buildings and well were demolished after Robert Sayle leased the plot in 1874 (below). As part of this same process the soakaway of Building 28 was also backfilled. Its infill contained a substantial portion of a Willow pattern tureen cover and base. There are no remains relating to the second frontage building, which was occupied by Robert Sayle in 1878.

The frontage of the third and fourth plots from the north, Standing Building 18/19, still survives largely in its late nineteenth-century form. This was combined behind a single façade c. 1866–9 (Fig. 5.41A–B), when it was occupied by the chemist Henry James Church who occupied the northernmost building in 1866 and the combined ‘newly built’ plot from 1869 onwards. The three-storey brick building, which retained earlier basements, is distinguished by three symbols on the keystones of the first floor window arches (Fig. 5.41C–E). The design on each of these is different; the southernmost is a foliage decoration with a stylized lotus flower at the top; in the centre is a Caduceus, two snakes entwined around the winged staff of Hermes, generally taken to be a symbol of the medical profession (Engle 1929; Friedlander 1992; Garrison 1920). Interestingly the true symbol of medical practice is generally accepted to be the single snake entwined around the unwinged staff of Aesculapius, both only coming into common usage in the twentieth century (Wilcox & Witham 2003). The northernmost symbol consists of a bunch of grapes flanked by vine tendrils. All of these symbols are closely paralleled by some of those in a more extensive series of seven on a nearby mid-nineteenth-century three-storied building at 41–45 Sidney Street, suggesting a local architectural tradition. Also associated with the 1866–9 rebuilding was Pit 60, which contained only glass bottles (MN 20), 12 of them pharmaceutical.

The southernmost frontage structure, Standing Building 20, was modified in the early nineteenth century and in 1814 was described as a ‘well built residence’ with a ‘handsome flight of steps and stone entrance’. Three planting beds were created in the rear yard in the

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Figure 5.38. Plan of all nineteenth-century features within the Grand Arcade street block and adjacent areas.
Figure 5.39. Plan of main excavation area at Grand Arcade in the nineteenth century.
Figure 5.41 (opposite). The frontage of Standing Building 18/19, which was constructed c. 1866–9: (A) photograph of the frontage, facing west; (B) elevation of the frontage; (C–E) decorated stone keystones from window arches showing foliage decoration with a stylized lotus flower at the top (southern), caduceus with two snakes (central) and a bunch of grapes flanked by vine tendril (northern); (F) stone plaque over the door showing a pestle and mortar with an owl, the symbol of the Roman goddess of medicine Minerva, sitting on one edge holding a scroll in one claw. To either side are the dates 1851 and 1934; the scroll beneath has a Latin motto which appears to read SCIENDO ET C??ANDO.

Figure 5.40. Nineteenth-century maps of the area, including: (A) map published by Baker in 1830; (B) 1st edition Ordnance Survey map surveyed in 1885.
Figure 5.42. Plan of Plot X in the nineteenth century plus material recovered from the initial backfilling of Well 37 in c. 1855–8 ([34524]): (A) Plan of nineteenth-century archaeological features; (B) brush handle, probably made from cattle long bone, likely to be a toothbrush and marked DIMMOCK CAMB[RIDG]E; (C) oval whiteware plate with blue transfer-printed decoration of Alpine chalets in a romantic setting, pattern mark Genevese, also Opaque M China; (D) large circular Late Unglazed Earthenware (red) cover with a knob-shaped handle, which may be a domed ceramic baking cloche used to bake bread.
Figure 5.43. Material recovered from the main backfilling of Well 37 in c. 1855–8 ([34338]): (A) Late Unglazed Earthenware (red) flowerpot with square-collared rim. Impressed roller stamp on rim SIB[LEY ELY] and white painted letters W·N; (B) Late Unglazed Earthenware (red) flowerpot with straight rim, and white painted letters W·N; (C) Late Unglazed Earthenware (red) flowerpot with square-collared rim, traces of red and black paint; (D) Late Unglazed Earthenware (red) saucer for flowerpot with square rim that has been painted red; (E) whiteware Genevese pattern plate; (F) whiteware plate with brown bands marked LEAC[H]; (G) a whiteware plate with blue transfer-printed decoration of a country garden scene, blue transfer pattern mark Fountain, in cartouche and impressed number 6; (H) a fine-grained white stoneware mortar marked 4/IMPROVED/STONE/M; (I–J) bone dominoes with wood plates, possibly of ebony, attached by pairs of copper alloy rivets; (K) willow brush back.
early nineteenth century (PBs 12–14); c. 1840–60 these went out of use and PBs 37 and 41 were backfilled. Well 37 contained 139 items (MNI) (Figs. 5.42–5.43) which were probably deposited at a time of change and ‘household success’ (Grover 2004). This could have been either in 1845, when William Newby a coal merchant died, or later c. 1852–58 when his widow Elizabeth Newby, a College servant, vacated the plot. As the backfilling of the well probably happened after the opening of the Cambridge University and Town Waterworks in 1855, the assemblage probably dates to c. 1855–8. Elizabeth moved to smaller premises without a significant garden at 18 Park Side, Parker’s Piece, and all her children had left Cambridge by 1861 which may explain why the material was deposited. The assemblage therefore relates to a household of one or two adults, their four children, two servants and perhaps an additional visitor. The assemblage is dominated by dining related material, including a Genevesse pattern dining service (Figs. 5.42C and 5.43E) showing Alpine chalets in a romantic setting, although they also had other services and possessed some relatively good quality Copeland and Garrett ceramics. This suggests that the family, and Elizabeth Newby in particular, subscribed to growing ideas of domesticity and gentility (Fitts 1999). There is also significant evidence for drinking alcohol, including imported wine.

Gardening is also prominent with 22 flowerpots (Figs. 5.43A–C and 7.2O) and two saucers for holding them (Figs. 5.43D). Some of the flowerpots were manufactured by the Elly potter Robert Sibley and two are marked with white painted letters WN, directly linking them to William Newby. The deposition of so much gardening-related material, combined with the abandonment of the planting beds, suggests that William and possibly Elizabeth Newby had a particular passion for gardening, but that the next occupants, the Price family did not and converted the yard so it could be used for other purposes (Cessford 2011b, 259). Uncommon vessels linked to food preparation, and presumably demonstrating the influence of Elizabeth Newby, included a large earthenware cover with a knob handle used to bake bread (Fig. 5.42D) and a white stoneware mortar (Fig. 5.43H). Other interests are indicated by the presence of two dominoes (Fig. 5.43I–J) and a probable bone gaming piece, while there were also some wooden brushes (Fig. 5.43K) and a worked bone brush handle from a toothbrush (Fig. 5.42B), inscribed DIMMOWC CAM… indicating that it was either made locally at Dimmocks Cote, or by a business in Cambridge run by someone with that surname.

Plot dominant Standing Building 20 was rebuilt c. 1867–69, its most notable feature being the rather grand Romanesque-style doorway to the side passage (Fig. 5.44A–C). This has an ornate semi-circular arched top with three parallel layers, set on a group of round and squared pilasters with highly decorated capitals. In each of the spandrels above the arch is a recessed roundel, containing ornate intertwined letters WM (Fig. 5.44C). These initials can be linked to William Mayland or Maitland, a photographic artist who occupied part of Plot X c. 1864–69. This door and passage provided access via a staircase to the upper floors of Standing Building 20, which were used as offices, and to the rear yard area. As part of the same building campaign an unorthodox structure, Standing Building 72 (Fig. 5.45), was also constructed in the rear yard as a purpose-built photographic studio for Mayland. There was no evidence for a ground floor doorway in the original two-storey structure.

Standing Building 72 measured 10.5m by 5.5m and had a timber frame infilled with lath and plaster set on brick dwarf walls four courses high. It appears to have been accessed solely by an external stairway which led to the first floor. This was an open studio space with large opening windows along the north wall designed to allow light to enter from the north, which would have been unimpeded as there was an adjacent open yard area. North light, also known as reflected or indirect light, is preferred by photographic artists as it negates the effect of the sun moving during the day and gives the artist much greater control. The pitched slate roof was not original, and it is likely that originally the northern side of the roof was panned with glass to allow more light to enter. The ground floor was entered via an internal staircase and was divided into three spaces. None of the ground floor windows or doors that were ultimately present were original to the building, and it is likely that these ground floor spaces were used as darkrooms.

As Mayland had been based in Cambridge since c. 1858 and his initials are present above the passage doorway it seems likely that Standing Building 72 was purpose-built for him and that he may have had a hand in designing it. In May 1869 the plot was described as including a ‘photographic studio’, but Mayland left soon after. The studio was then used by the figurative painter and engraver Robert Farren, the son of a local photographer, and members of his family including his daughter Amy, an artist and porcelain painter (c. 1869–81). It is unclear whether photography continued at the premises, although it appears that it may have been envisaged in 1875. By 1881 Standing Building 72 had been converted into a school, so it had a relatively short use life for the function it was designed to fulfil. It was presumably at this stage, if not before, that windows were inserted into the ground floor to convert it from darkrooms to more useful space, although there is no evidence that a ground floor door was added.

Standing Building 20 had no basement and its rooms included a parlour, a good drawing room, several bedrooms, a convenient kitchen and a small walled garden. The second floor of the rear wing had a mansard roof, which may have been an addition of the early nineteenth century to convert the roof space into a usable room. In the rear yard eighteen-century PB 10 continued in use and three PBs 12–14, two of them brick-lined, were created in the early nineteenth century during the occupation of the plot by the coal merchant William Newby (1822–45). All of these features went out of use c. 1840–60 when the garden area underwent a major reorganization. At the same time two pre-existing stone-lined wells, Wells 37 and 41, were backfilled. One of these, Well 41, contained relatively little material, although there was leatherdressers’ waste from the skins of 11 sheep and a bone from a tawny owl that may have lived nearby. The other, Well 37, contained much more material (Figs. 5.42–5.43).

Later in the century a new brick-lined well, Well 51, was built in the yard and two ancillary structures, Buildings 46–47, were constructed, indicating that the plot was being more intensively utilized. In 1867–69 the frontage building Standing Building 20 was extended forward by about a metre and in May 1869 it was described as a ‘part new builded brick built house’ (Fig. 5.44). The cellar below the front room was largely infilled and the ground floor, which had been c. 0.5m above street level, was lowered to only c. 0.15m above. The old front wall of 2in brick was demolished and a new one of grey 3in brick was erected above a new glazed shop front with a central entrance and an elaborate doorway to the side passage.

Structurally, the extended upper floors were supported on nibs, formed by short lengths of the old front, which in turn held up the old floor plates which were strengthened by iron plates or fitted sandwiched between additional timbers carrying short joists to the new front wall. The structure of the old roof was retained but rafters to a lower pitch were added to the front to extend the roof over the extra metre. Internally there was some refitting. A white marble fireplace surround was put into the first floor front room and the small south room on the second floor front was given a corner fireplace.

The floor of the side passage was always close to street level. It was boarded and had heavy joists bridging a narrow brick-walled cellar. The rear wall above the ground floor was rebuilt in 3in brick, presumably in the 1880s. That was subsequently masked by the addition of service rooms containing sinks and WCs on each floor. The new back wall was timber-framed and weather-boarded. The rear wall above the ground floor windows or doors that were ultimately present were original to the building, and it is likely that these ground floor spaces were used as darkrooms.
Figure 5.44. The frontage of Standing Building 20, which was constructed c. 1867–9: (A) photograph of the frontage, facing west; (B) elevation of the frontage; (C) photograph of intertwined initials WM in spandrels over a doorway arch; (D) plan of the property, based upon a plan of the mid-1870s and archaeological evidence.
Chapter 5

Position of dividing walls and staircase (no longer extant)

SB72
the stair was then reduced and could be approached only by a trap door. It may have been then that the cellar below the passage was partly infilled with loose rubble.

The ground floor of Standing Building 72 (Fig. 5.45), which was open when recorded, was formerly divided into three rooms, each with a window to the north. A faint scar on the south wall indicated the position of a former internal staircase leading to the first floor. The west gable wall had been removed and an opening in the north wall was clearly a late insertion. Between the east and middle windows in the north wall was an area of brick infill that may represent an earlier door, but looks more likely to be a later insertion or repair. There was also a door opening in the east gable wall, which also appears to be a later insertion. The first floor was an open studio space with large opening windows along the north wall. It was also approached by a later covered external staircase against the northeast corner. Fragments of ‘artistic’ wallpapers survive beneath later decorations on both floors, including a scheme of foliage on the internal staircase and a variety of successive patterns on the ground floor. The first floor ceiling was tongue-and-groove. In the east end of the south wall was a blocked later doorway, possibly intended to provide access to a fire escape that no longer existed.

The external staircase, which accessed the first floor in its northeast corner, appeared from the outside to be a secondary feature. It was brick built rather than thatch and plaster and was quite precariously supported on a late-looking red brick wall to the east and a wooden ‘leg’ on its northwest corner, which appeared modern and is likely to be a replacement. Internally, however, the picture was not as straightforward. On the first floor the pattern of windows ended with a ‘half’ window at the east end, however this was an opening casement in its own right rather than half of a blocked or removed larger window. It is possible that there were originally nine windows; there is certainly space to complete the run across the whole first floor, but if this is the case then no trace of the ‘missing’ windows survived. Additional evidence is present on what would be the outside wall of the studio, but within the staircase structure, where there are the remains of a dado rail and moulded skirting with decorated anaglypta wallpaper between. Truncation of this decoration suggests that the present door to the first floor was a later insertion, but that it is a replacement for an earlier door integral with the decorative scheme. The most likely interpretation is that there was always an external staircase attached to the building, but that the recorded structure was the replacement for an original feature. It appears that access to the building was at first floor level, with the internal staircase used to access the ground floor, explaining the apparent lack of a ground floor entrance.

Standing Building 72 appears to have been a purpose-designed photographic studio for William Mayland, a photographic artist who occupied part of Plot XI in 1864–69. Photography was still relatively apparent lack of a ground floor entrance. In 1864–69 (Petty 1991). These were both apparently purely business occupied part of Plot X in 1864–69. Photography was still relatively apparent lack of a ground floor entrance.

Figure 5.45 (opposite). Standing Building 72 ‘the studio’, which was constructed c. 1867–9: (A–B) ground and first floor plans of the building; (C) the northern elevation; (D) the eastern elevation; (E) photograph of building during demolition, facing southeast; (F) photograph of first floor during demolition, facing south. ‘honourable mention’ at the International Exhibition in the same year, for views of Cambridge University (class XIV, no. 3125).

In the 1860s he was the preferred photographer for portraits of local Cambridge eminences and in 1866 he was invited to Sandringham by the Prince of Wales to take photographs of a group of his friends. Mayland then moved to London (1869–82), going into partnership with Thomas Richard Williams (1824–71) a successful pioneer of stereoscopic photography. This partnership continued with Williams’s son until 1876. Mayland then went bankrupt in 1878 and his wife Mary died in 1879. He won a medal at the Photographic Society exhibition in 1880 before retiring due to ill health in 1882; he lived in Tunbridge Wells (1888) prior to returning to London by 1901. He died in 1907. Standing Building 72 was later used by the figurative painter and engraver Robert Farren who was born in Cambridge in 1832 and is listed in a directory of 1878 as having an ‘artist’s studio’ at the premises. His work was exhibited in London 1868–80, particularly at the National Gallery and at Suffolk Street, and he published two books of Cambridge views (Farren 1880; Farren 1881). Farren moved to Scarborough for health reasons in 1889, although he continued to paint college portraits into the 1890s. He returned to Cambridge by 1901, and lived there until just before his death in London in 1912. Robert’s daughters Mary, Jessie, Amy and Nellie were also artists and a Miss M. Farren, an artist and porcelain painter, is listed at the premises in 1878–81. Robert’s father, William Farren, was a photographer in Cambridge (1864–81) and in 1875 he appears to have planned to open a studio in St Andrew’s Street; although this was eventually cancelled these plans may have involved Standing Building 72. A plan of the mid-1870s indicates how the plot functioned with separate frontage and rear premises (Fig. 5.44D).

Plot XII

By the early nineteenth century the garden behind Plots IX–X was a single entity that measured c. 42m wide by c. 53–65m long, covering c. 2100 sq. m. In 1814 this garden was described as 190ft (58m) by 130ft (39.5m) in extent and had fruit trees and a greenhouse. Abutting the rear wall of Building 29 were three early nineteenth-century structures: brick-lined drain and Soakaway 6 and two irregularly shaped brick-lined Pbs 15–16. Further back was ADP 13, which contained the partially articulated remains of a two year old pig. In 1862 the garden was leased to Robert Sayle; at this time it covered 2 roods and 3 perches (2099 sq. m) and was largely open but contained two WCs, a greenhouse, a large summer house, a pump and had a small gateway leading onto Tibb’s Row (see Fig. 5.79A).

Plot XIII

In 1802 Plot XIII included a dwelling house with a shop, two parlours, a kitchen, a washhouse, four bedrooms, a small garden, and a yard and a garden. The main building was ‘ancient and extensive’ with small rooms, and would be expensive to repair. The Headley family who had occupied the plot since c. 1723 continued to lease it, but by 1815 most of the family had moved to Hobson Street and Sarah Headley married the Reverend James Speare who leased the plot in turn. A graduate of Clare College, Speare was at this time rector of Elmsett, Suffolk, and he immediately sublet the plot to John Furbank, a cheesemonger, grocer, tea dealer and tallow merchant born in Fulbourn c.1797. The plot underwent a major reorganization c. 1813–23, probably linked to the transition of 1817. As part of this Soakaway 2 (Fig. 5.46) was backfilled with ash and a mixed domestic assemblage (MNI 119) of pottery and glass vessels dominated by dining-related material including a soup dish from Trinity College (Fig. 5.46E) and a bottle of Dalby’s carminum (Fig. 5.46F), plus an infant’s medicine containing opium and some bone from food waste.

By 1823 the chandley office was in a very bad state of repair ‘as much as to require being taken down’ and the roof of the main house ‘wants stripping’. The plaster at the end of the house next to the garden ‘wants fresh doing’ and one of the garden walls required new topping. Furbank occupied the plot until 1841, but then moved...
Figure 5.46. Mid-eighteenth-century brick-lined Soakaway 2, which was backfilled c. 1813–23: (A) section; (B) photograph, facing east; (C) pearlware Rococo shell-edged plate (c. 1784–1812) with blue hand-painted pagoda scene ([30346]); (D) large plain oval creamware serving dish with impressed makers mark HS*Co ([30346]); (E) good quality creamware soup dish with hand-painted mark Trin.Coll on inside of base within circle. The base is heavily scratched indicating intensive use ([30291]); (F) Late Glazed Red Earthenware rounded jar or probably jug with single vertical strap handle, glazed internally and externally; (G) Late Glazed Red Earthenware flared bowl with clubbed rim, glazed internally ([30289], [30346], [30540]); (H) English tin-glazed earthenware ointment jar, heavily worn but complete apart from a small chip on the rim ([30346]); (I) pale green cone or steeple shaped pharmaceutical bottle that tapers towards a short cylindrical neck and has an applied flared lip. Made in a two-piece mould with side seams and pontil scar. Body embossed vertically DALBY’S CARMINATE ([30290]).
Figure 5.47. Standing Building 70 ‘the Warehouse’, constructed in 1845: (A–D) plans of the basement to second floors; (E–G) northwest, northeast and southwest elevations; (H) cross-section of the building.
bricks laid in Flying Flemish or Monk bond and measured 14m long by 5.5m wide, with a small basement at the east end. Although the majority of the warehouse would have been used for storage there were two smaller basement and ground rooms. A set of steps descended to a basement at the eastern end of the building. This had a window on its east side and a large fireplace on the south wall. Sealed under the floor of the basement room was brick-lined Well 52 (see Case Study 11). The ground floor away, dying in 1854. In 1843 the plot was leased to Edward Jay, a grocer, tea dealer, hop and seed merchant born c. 1808 at Waltham, Hertfordshire, who had previously been based at Plot XIX since c. 1833. In 1845, soon after the Jay’s arrival, the chandling house was replaced by a ‘new warehouse’ and the Emmanuel College bursar’s account mention Jay’s ‘New Warehouse’, for which the College paid £200. This three-storey brick-built structure, Standing Building 70 (Figs. 5.47–5.50), was constructed from grey Cambridge bricks laid in Flying Flemish or Monk bond and measured 14m long by 5.5m wide, with a small basement at the east end.

Although the majority of the warehouse would have been used for storage there were two smaller basement and ground rooms. A set of steps descended to a basement at the eastern end of the building. This had a window on its east side and a large fireplace on the south wall. Sealed under the floor of the basement room was brick-lined Well 52 (see Case Study 11). The ground floor

Figure 5.48. Standing Building 70 ‘the Warehouse’, constructed in 1845: (A) north side of the building from a 3D model, facing southwest; (B–D) Photographs of the building, facing southeast, northwest and east.
**Case study 11: Well 52 incorporating specialist information from Richard Darrah and Ian Tyers**

Well 52 (Fig. 5.49) was constructed in 1845, presumably as the earliest element associated with warehouse Standing Building 70 (Figs. 5.47A and 5.47H). It was sealed beneath the brick floor of the cellar of this building and was only revealed when the floor was removed by machine. In common with many nineteenth-century wells, it lacked the timber baseplate typical of earlier centuries.

The well’s unmortared brick-lined shaft measured 1.2m in diameter and 2.5m deep with a domed top (Fig. 5.49A). From this protruded a lead pipe (Fig. 5.49B), which led to Well 52 being nicknamed ‘the Dalek’. This pipe led not to the cellar but instead appears to have provided water to the ground floor kitchen space, where there was presumably a non-return valve at its top end and a cast iron or wooden pump. This was the only well at the site whose lead pipe was not eventually retrieved, presumably because it was not worth the effort of lifting the brick floor to do so. The pipe was so heavy that it had to be lifted by machine, at which point it was realized that its base was perforated and that there was a rectangular Scots pine timber block at the end to seal the pipe and keep its lower end above the silt in the bottom of the well (Fig. 5.49B). The timber block was band sawn from exceptionally slow growing Scots pine (average under 0.4mm/year) with a 273-year sequence of rings that could not be matched to any softwood reference data and was presumably imported from the Baltic or North America. There is no documentary evidence as to who created Well 52; however, the 1851 census records that resident in Cambridge were James Gunn aged 53 a well borer and Thomas Swan aged 30 a well digger. It is unclear how long Well 52 continued in use but it seems likely that it functioned well into the twentieth century, despite the arrival of mains water in the late 1800s.

**Figure 5.49.** Brick-lined Well 52, which was constructed in 1845: (A) photograph of the well, facing southeast, showing the brick dome; (B) the perforated circular lead pipe with rectangular Scots Pine block acting as a plug ([34630]).
was divided into two, with the eastern third separated from the rest by a brick wall. The line of this wall part way across one of the blocked ground floor windows, suggesting that it is not an original feature. Mortice holes cut in the underside of a beam just north of the doorway in the east wall show that at one stage there was a stud wall dividing off the northern third of the space. Taken together, this suggests that there was originally a separate room in the southeast corner of the building entered by a door in the east wall and lit by a window in the same wall. There is a large fireplace on the south wall similar to that below in the basement. A plan of 1845 indicates that at least one, and probably both of these rooms were used as kitchens, explaining the provision of a water supply and two large fireplaces. The location of kitchens in a warehouse seems an unusual arrangement, especially as the same plan indicates other kitchens in another building on the plot. One possibility is that this was not a domestic kitchen, but rather that it was used for various types of processing of foodstuffs such as blending tea, grinding and roasting coffee, cleaning fruit and weighing and packaging a range of goods.

The remainder of the ground floor of Standing Building 70 would have been accessed via a central set of double-width doors on the north side, through which goods would have entered the warehouse from wagons which would have been able to park outside. There were also four segmented-headed windows arranged symmetrically in pairs on either side of the doors. At the northeast the corner was rounded and there was a small window on the eastern wall. There was no evidence for internal stairs, and the first and second floors must have been accessed externally. The arrangements for these staircases on the north side were similar to the ground floor, with central double-width loading doors and four symmetrical windows, although the second floor also had a window on the eastern side and later alterations mean it is unknown what arrangements were present on the western side. The first and second floors were both single open spaces. Overall, Standing Building 70 provided c. 30 sq. m of kitchen space and c. 190 sq. m of warehouse storage space.

To the east side of the first floor door there were six brick-sized wooden blocks set rather irregularly into the fabric of the wall (Fig. 5.50). One of these was blank but five carried sets of initials and the date 1845 and all are clearly integral with the construction of the building. The lowest block, which occurred on a row by its own, had the initials of Edward Jay himself (EJ). Two courses above this was a row of four blocks. Reading from left to right the initials are those his 10-year old son Edward Jay junior (EJ with J II below), his wife Jane Maria Jay (JMJ), his assistant James Baker (JB) and his eight-year old daughter Maria Jane Anne (MJAJ). On the next row up the uppermost block does not appear to have ever been carved, but could have been painted. On the inside of the same floor near a window a brick was observed that had been carved with the initials of Edward Jay and the date 1845. The wooden blocks would not have been easily visible from ground level and it appears that the Jays, anxious to leave their mark on the building even though it was constructed at the College's expense, deliberately placed the blocks out of the casual observer's line of sight. It is interesting that Jay's assistant James Baker was commemorated, but the household servants were not. Missing from the list are two of Edward Jay's sons, Henry/Harry (aged four) and Frank (aged three), who appear to have been regarded as too young.

A number of other features were built at the same time as Standing Building 70, including Drains 8–9 that used faceted 'horseshoe'-shaped pipes and ran around the northern side of the warehouse, plus a rectangular slightly sunken brick-lined toilet structure Water Closet 1 just behind it. Slightly further back was set domed brick-lined Well 53, which supplied a pump located against the boundary wall. The construction deposits of this well contained part of a Willow pattern plate produced for Thomas Wicks, the cook at Emmanuel College 1807–51 who lived nearby at Plot XV. This well would have supplied water for use in the yard, while that under the warehouse/kitchen (Well 52) would have supplied Standing Building 70. Earlier stone-lined Well 45 continued to supply the frontage building with water. Slightly later, in 1848, there was some

![Figure 5.50](image.jpg)  
Figure 5.50. Wooden blocks and a brick carved with the initials of the occupants of the plot from Standing Building 70 'the Warehouse', constructed in 1845.
major rebuilding of the garden walls around the plot tail. Edward’s wife Jane died in 1850 and in 1851 he was living with his two sons Edward junior and Frank, two visitors and his assistant James Baker.

In 1855 Edward Jay died in Great Yarmouth and was succeeded by his son Edward Jay junior, in partnership with his father’s former assistant James Baker. By this time grocers stocked a much more extensive range of processed foods, including tinned goods after 1813 and cornflour after 1841. They also began to stock fresh foodstuffs, such as cheese and bacon, which had not previously been part of their repertoire. By 1863 Jay junior moved to 2 Brunswick Place and by 1866 the business also had premises nearby at 21 Corn Exchange Street and 7½ St Andrew’s Hill. In 1866–7 Jay fell into arrears and Baker took sole control of the business. Jay then left Cambridge. He initially worked as a commercial traveller in Newmarket (1868 and 1874), Wood Ditton (1871) and Exning (1877), before settling in Peterborough and becoming a corn and seed merchant again (1881–1912). In 1874 the plot still reflected the constructional activities of the 1840s, but between then and 1885 a number of buildings were constructed on the southern side of the plot tail, one of which had deep cellars and contained a well (Well M1). James Baker died in 1887 and was succeeded by his widow Anne; after her death in 1895 the business was taken over by Harold Blinkhorn Flack and Harper Tom Judge, who only used the plot for business purposes and lived in Chesterton.

At some point c. 1862–1900 Well 45, which was located in the passage to the south of the frontage building, went out of use. This was because the plot was connected to the mains supply of the Cambridge University and Town Waterworks, which was established in 1852 with its waterworks opening in 1855 and 1500 premises being connected by 1860. Sewerage was provided at about the same time and in 1880 there is a record that there ‘has some time since been laid down’ a pipe leading from Plot XIV to the south ‘making communication between the water closet and drain’, with the drain located in the passageway. Associated with the backfilling of Well 45 was a spread of 11 stoneware jars and one stoneware bottle beneath Foundation 1 (MNI 12). In the late 1880s a small pit, Pit 61 (MNI 31), was dug in the plot tail to dispose of 27 glass bottles, mainly a set of 17 near identical beer bottles. Although very different, these two groups, one composed solely of utilitarian stoneware vessels and the other solely of utility bottles, both relate to the relatively small-scale disposal of broken or otherwise worthless material related to the continuing grocery business. Rubble-built Foundation 2 was constructed c. 1883–90 to provide a footing for some form of garden feature. The foundation contained a complete torpedo-shaped soda water bottle of Charles Barker & Sons (see Fig. 5.95); given the nature of the foundation this bottle must have been carefully and deliberately placed to have remained intact.

Plot XIV consisted of a frontage building with a relatively extensive ‘L’-shaped garden behind. It was occupied by Sarah Dobson, who was born in 1796 and came from a farming family in the nearby village of Stow cum Quy. Sarah ran a school at the premises from at least 1841, and possibly as early as c. 1820, until c. 1865–66. As well as Sarah, the household typically consisted of three to four other teachers, mainly close female relatives of Sarah, a number of pupils, mainly from Cambridge and nearby villages but including individuals from as far afield as Australia, and two servants. Part of the rear garden of Plot XV to the south was transferred to Plot XIV c. 1808–25 and new brick-lined Drain 10 was added, leading into the existing cistern and two square brick-lined garden structures with iron bars over the top, whose function is uncertain, were constructed. An outside WC block, Standing Building 99, which had two stalls and the doors facing to the west, was also built on the footprint of a demolished building previously associated with Plot XV, possibly reflecting the increased sanitation requirements created by the school. In the garden two rectangular Pibs 17–18 plus some circular or irregular PHs 1–6 were dug, as well as two postholes which presumably supported trellis shrubs. These features represent a series of independent events that occurred in the garden over a period of years or even decades c. 1820–40.

Several of these garden features contained significant assemblages of material; these are particularly interesting as they are the only groups of material from the site where the head of the household that created them was female, and indeed in 1841 the household was entirely female in its composition. As aspects of this assemblage have been published in detail elsewhere (Cessford 2018a; see also Cessford 2009), an overview is presented here.

The largest assemblage came from a ‘percolation fill’ situated at the base of PH 3 (Fig. 5.51A) that was deposited c. 1822–34 (MNI 129). This group dominated by dining-related material and indicates that the adults in the Dobson household used a range of relatively high-quality blue transfer-printed dining and tea drinking ‘services’, suggesting that Sarah subscribed to developing ideas of domesticity and gentility (Fitts 1999). The Sicilian pattern was the most common (Fig. 5.52A–D) and the literary associations of this design suggest that Sarah Dobson may have supported both the traditional moral values such as honour and integrity and the political message concerning the oppression of women in patriarchal society that the pattern could have conveyed. The children used cups decorated with images and text from the song ‘Where’er I take my walks abroad’ by Isaac Watts (Fig. 5.52E–F), a leading early eighteenth-century non-conformist hymn-writer, theologian and logician whose straightforward and relatively gentle Christian ideas and lilting metre were popular in the nineteenth century. Matching cups and saucers were apparently discarded when one was broken (Fig. 5.53C–D) reinforcing the notion of ‘services’, while the presence of three complete blacking bottles suggests a greater than normal interest in cleanliness and appearance.

The substantial animal bone assemblage that was recovered indicates a preference for the moderately expensive topside or silverside cuts of beef, shoulders of mutton and legs of pork. Pork was one of the most expensive meats at the time and is much commoner in this group than in others of this date (17.5 per cent of the meat from the main domesticates versus 0–9.7 per cent in other assemblages). As pigs were still being raised in the plot, the pork was potentially not all obtained commercially. There were also parts of at least 22 birds, the largest number from any assemblage, with 12 chicken carcasses as well as other domestic poultry, waterfowl, pigeon and game birds including red grouse, partridge and pheasant. Only three clay tobacco pies were present; however, the ratio of pipes to ceramic vessels (1:18) is not significantly lower than other assemblages of c. 1800–50 (1:14).

It therefore appears that despite smoking being a gendered activity associated with men, and supposedly only undertaken by women of loose morals or low status, it took place in the Dobson household. There was also evidence for the consumption of alcohol, notably two wine glasses from a matching ‘service’ and some utility bottles, two of which are French or Belgian imports and are likely to have contained wine. At the time male working class drinking culture centred upon public houses, which respectable women did not frequent. The smoking and alcohol drinking in the Dobson household suggest that private female consumption was taking place within the home, despite the fact that both activities would have been disapproved of in more public contexts.

Other garden features including PB 17 and PH 1, plus a nearby posthole, contained a child’s cup with a text from ‘Innocent Play’ (Fig. 5.54G), another song by Isaac Watts, as well as 17 slate pencils (Fig. 5.54E–F). The pencils are 32–75mm long and have been heavily used and repeatedly sharpened. There were no identifiable writing slates, despite the presence of the pencils, and other items frequently associated archaeologically with nineteenth-century childhood such as dolls, tea sets, metal toys, marble stoppers (Wilkie 2000) were absent. This may indicate that the school was a relatively austere establishment; alternatively, it could just be that disposal was limited
Figure 5.51. Sarah Dobson and her mid-nineteenth-century school: (A) photograph of PH 3 created c. 1822–40 showing percolation fill (lower right), facing north; (B) headstone of Sarah Dobson, her sister Margaret and nieces Sophia and Katie at the Mill Road cemetery, facing west; (C) plan of archaeological features; (D) the property as depicted in the 1st edition Ordnance Survey map surveyed in 1885.
Figure 5.52. Ceramics from percolation fill of PH 3, created c. 1822–40 ([30102]): (A–D) blue transfer-printed whiteware Sicilian pattern service; (A) 14in-serving dish, with Sicilian pattern mark in cartouche on rear with impressed 14, and impressed IMPROVED STONE CHINA with a mixture of real and fake Chinese characters; (B) cup; (C) plate; (D) a serving plate; (E–F) whiteware cups with pink transfer-printed decoration and the Isaac Watts text “For I have food while others starve, Or beg from door to door.”
From suburb to shopping centre: seventeenth to twenty-first century

Figure 5.53 (opposite). Further ceramics recovered from the percolation fill of PH 3, created c. 1822–40 ([30102]): (A) whiteware bowl with blue transfer-printed rose and thistle decoration and transfer-printed SPODE mark on the base; (B) octagonal Chinese Export porcelain plate with floral decoration; (C) matching set of bone china cup and saucer with blue transfer-printed decoration marked FELSPAR PORCELAIN/1803/Blue/M; (D) matching set of whiteware cup and saucer with blue transfer-printed Two Temples pattern; (E) whiteware cup with blue transfer-printed decoration marked Flora /16/ OPAQUE CHINA; (F) mocha-style whiteware cup with red, green and brown bands; (G) whiteware chamber pot with blue transfer-printed decoration of a romantic scene of Gothic ruins and pattern mark VERONA in cartouche; (H–J) three Utilitarian English stoneware blacking bottles, one marked BLACKING BOTTLE/6/J D.

Figure 5.54 (above). Various garden features of c. 1820–40, including: (A) photograph of PB 17, facing west; (B) whiteware bowl with blue transfer-printed decoration scene with the pattern name Indian Temple and the makers mark EKB, of Elkin, Knight and Bridgwood of Lane End (1827–40) from PB 17 ([30246]); (C) whiteware chamber pot with blue transfer-printed decoration with the pattern name The/Serenade and the makers mark R&C of Reed and Clementson of Hanley (1832–9), from PB 17 ([30246]); (D) eighteenth-century copper alloy Georgian style furniture drop handle, from a posthole next to PH 1 ([30003]); (E) slate pencils from a posthole next to PH 1 ([30003]); (F) slate pencils from PH 1 ([30434]); (G) child’s whiteware cup with part of the text of Isaac Watts’ Innocent Play, from PH 1 ([30003]).

Abroad in the meadows to see the young lambs,
Run sporting about by the side of their dams
With fleeces so clean, and so white;
Or a nest of young doves in a large open cage,
When they play all in love without anger or rage,
How much may we learn from the sight!
to material owned by Sarah Dobson and the personal possessions of the children were not discarded.

By 1865–6 Sarah Dobson had moved to smaller premises a short distance away at 7 St Andrew’s Hill, which only had a small yard or garden. Sarah died in 1886 and was interred alongside her sister Margaret who had died in 1870; her nieces Sophia and Katie were later interred in the same burial plot in 1910 and 1913. In 1885 the plot was depicted as having an ‘L’-shaped formal garden with trees, paths, regularly arranged beds and a pump, and it appears that this was largely how the garden had been when the plot was occupied by the school. It would be tempting to interpret the school garden as a pleasant, almost bucolic, location for the staff and students. This is, however, counter-pointed by the raising of pigs to eat and the presence of the WC block, apparently located so as to be concealed from the main frontage building but visible from most of the garden. This tension is paralleled in the material culture, for while ideas of gentility meant that cups and saucers were discarded when the corresponding element in the service was damaged, there was also a strong element of frugality, again exemplified by the raising of pigs but also by the slate pencils which were repeatedly sharpened so that they could be used as intensively as possible before disposal.

Plot XIV was subsequently occupied by a solicitor, John Saunders Christmas (1867–92). After this, Plot XIV ceased to be used for residential purposes and was divided between several businesses, including a solicitors, an auctioneer, a surveyor and a tobacconist, although the garden area remained largely unchanged and was not developed.

**Plot XV**

In the first quarter of the nineteenth century Building 35 was demolished and the rear 5m of Plot XV was transferred to Plot XIV. Soakaway 3 was then backfilled and a domed brick top was added to pre-existing Well 47. These changes, particularly the backfilling of Soakaway 3 (Case Study 12), appear to relate to the occupancy of Thomas Wicks, the cook of Emmanuel College 1807–51, who

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**Figure 5.55.** The early–mid-nineteenth-century College cook Thomas Wicks: (A) plan of nineteenth-century features in Plot XV; (B) Celtic cross of Thomas Wicks, College cook and his wives Mary and Rose in the Mill Road cemetery, facing west; (C) sherd from a whiteware blue transfer-printed willow pattern plate marked T WICKS on the reverse from construction deposits of Well 53, probably constructed in 1845 in Plot XIII ([30125]).
Case study 12: The backfilling of Soakaway 3
incorporating specialist information from
Andrew Hall, Vicki Herring, Lorraine Higbee,
Mark Samuel and Simon Timberlake

The backfilling of Soakaway 3 dates to c. 1808–25 and
the assemblage of over 300 items (MNI) consisting of
pottery and glass vessels, clay tobacco pipes
and bone is a mixture of domestic and business
material, dominated by items related to dining. Some of this material predates the end of Thomas
Wicks’ apprenticeship c. 1795 and occasionally even his birth in 1774. Examples of this include
four Chinese export porcelain vessels (c. 1730–50 and 1750–60), two Staffordshire white salt-glazed
stoneware vessels (c. 1750–65), two glass utility bottles (c. 1750–80), a bottle seal of 1770 and a
piece of English soft paste porcelain (c. 1760–70). This pattern suggests that some of the material
comprised in some sense either familial or business ‘heirlooms’.

The pottery has an EVE of 88.01 (EVE per MNI 0.49) with 2055 sherds weighing 40,071g (MSW 19.5g). The vessels are mainly related to dining and tea drinking, with substantial amounts also linked to personal hygiene and gardening. Dining vessels included plates (MNI 29), side plates (MNI seven), bowls (MNI eight), jugs (MNI four), deep plates/dishes (MNI three), serving bowls/dishes (MNI three), lids (MNI four), a footed salt (MNI one) and a sauceboat (MNI one). There is a mixture of relatively plain creamware, highly decorated pearlware and other wares. The creamware can be divided into three groups based on the quality of the fabric and the lightness of the colour. Some of the best quality material bears Wedgwood marks (MNI 12), some material of slightly lesser quantity was produced by Turner’s (MNI nine) and the bulk of the material is lower quality and unmarked (MNI 52). Josiah Wedgwood (1730–95) began to experiment with creamware in 1754, set up his own pottery works in 1759 and presented a service to Queen Charlotte in 1762. John Turner (1738–87) began working on his own in the late 1750s and was a pioneering and successful potter; he was succeeded by his sons William and John.

There were two slightly older Chinese export porcelain plates of c. 1750–60, one of which was repaired at some stage. A number of ‘services’ were identifiable. One was a pearlware fabric with even shell-edged decoration and impressed curved lines of c. 1802–32 (MNI eight) (Fig. 5.56A–D). This consisted of side plates (MNI three), an even smaller plate (MNI one), deep plates or dishes (MNI two) a lid for a large serving vessel (MNI one) and a sauceboat (MNI one) with T.Wic... hand-painted in gilt providing a link to Thomas Wicks (Fig. 5.56C). There were also creamware vessels with a thick brown hand-painted band (MNI seven), mainly plates (MNI six) and a lid for a small serving vessel (MNI one) (Fig. 5.56E–F). Although these were clearly a ‘service’ the vessels were variable; one was better quality and marked as a Wedgwood product and on another the band was underglaze rather than overglaze. One of the lids with moulded and hand-painted decoration may have been designed to resemble a beehive, suggesting that it could come from a honey pot, while another lid is from a butter dish. One distinctive pearlware bowl has brown transfer-printed decoration of conch shells and other marine elements; this might have been specifically linked to seafood (Fig. 5.56G).

Tea drinking included saucers (MNI ten), tea cups (MNI eight), tea bowls (MNI five), tea cups/bowls (MNI eight), slops bowls (MNI four), coffee cans (MNI two) and a teapot (MNI one). The vessels consist principally of plain creamware, plus pearlware and some other wares decorated with Oriental scenes. There was some evidence of sets of material; three saucers and three tea cups in a creamware fabric are all decorated with a thin brown band and there are three pearlware tea bowls or cups with identical Oriental scenes. There were also parts of a Chinese export porcelain tea bowl and saucer with famille rose decoration of c. 1730–50 that must have been of some age when deposited. One very different piece was an almost complete strap handled black basalt teapot with a faux bamboo reeded body (Fig. 5.56J); this was all present but there was no trace of its lid, suggesting that a previously broken or lost lid may be why it was discarded.

Vessels related to personal hygiene are principally chamber pots (MNI 16) plus a stool pan (MNI one). These were mainly creamware (MNI ten) and were largely plain although one has a fluted body and the stool pan is also creamware. There were also four blackware or iron glazed chamber pots (Fig. 5.56L) and a blackware bowl (Fig. 5.56K). There were also two Nottinghamshire/Derbyshire-type stoneware chamber pots (Fig. 5.56N) and one of refined white earthenware, with blue and white transfer-printed decoration. Most features contained one to four chamber pots, the two exceptions being Soakaway 3 and Cellar 4, which is related to an inn, which had 11 chamber pots plus one stool pan. These two groups are too large for purely domestic requirements and must represent business-related groups; this group must relate to the Wicks family’s collegiate interests. In inventories chamber pots are frequently listed alongside tablewares rather than in the bedroom and it is clear that semi-public urination was sometimes practised in male contexts (D’Agostono 2000). The chamber pots, both as a whole and the individual larger feature groups, come in a wide variety of fabrics. In general the eighteenth- and early nineteenth-century examples are relatively plain, the exception being the Westerwald and Scratch Blue examples. While it was the gyps and bedmakers that would have dealt directly with chamber pots, it is possible that the wealthier servants, such as the cooks, bought and supplied the chamber pots which were effectively hired to out to fellows and students, although there is no documentary evidence for this.

Other hygiene-related vessels included three large plain creamware water jugs and one basin used for washing. Horticulture vessels included 18 flowerpots, one saucer and one Mocha decorated flowerpot for inside use. Medicinal vessels consist of five tin-glazed earthenware drug/ointment jars (Fig. 5.560–R), two of which are complete and unbroken. They all have different fabrics and glazes suggesting a collection built up over time. Other drinking includes two Mocha decorated straight-sided vessel and a creamware tankard with red transfer-printed decoration (Fig. 5.56M).

Glass vessels include utility bottles (MNI 49), phials (MNI 11) and drinking glasses (MNI nine). The utility bottles are of free blown black glass and include one complete example (Fig. 5.57A), two are of square cylindrical design of c. 1760–80, while the remaining 47 are of cylindrical design of c. 1770–1810. Although a range of uses are possible, it is likely that most of these bottles contained wine. There was also a seal stamped
Figure 5.56. Ceramics recovered from the backfilling of Soakaway 3 in c. 1800–25 (32901): (A–D) pearlware fabric shell-edged service with even scallop and curved lines of c. 1802–32 including a side plate, a very small plate, a lid for a large serving vessel and a sauceboat with T.W[icks] hand-painted in gilt; (E–F) creamware fabric service with a thick brown hand-painted band, including a plate and a lid for a small serving vessel; (G) pearlware bowl with brown transfer-printed decoration of conch shells and other marine elements plus blue band; (H) pearlware jug with hand-painted brown and gilt bands; (I) mocha-style pearlware coffee can decorated with orange and brown bands; (J) black basalt teapot; (K) blackware or iron-glazed bowl; (L) blackware or iron-glazed chamber pot; (M) creamware tankard with red transfer-printed decoration; (N) Nottinghamshire/Derbyshire-type stoneware chamber pot, with machine turned dimple and band decoration; (O–R) tin-glazed earthenware drug/ointment jars.
Figure 5.57. Various materials recovered from the backfilling of Soakaway 3 in c. 1800–25 ([32901]): (A) free blown cylindrical green glass utility bottle with brown patina, high rounded base kick with disc pontil scar, short tapered but slightly bulging neck with single applied collar below rolled lip, of c. 1780–1810; (B) rounded seal from green glass utility bottle with patina, stamped E•G /1770; (C–F) colourless free blow uneven cylindrical phials, late eighteenth century; (G) type 23 clay tobacco pipe bowl of c. 1760–1800 with initial IP on spur (H–J) stem fragments with Wyer-style decoration marked J•PAW·/ SON, Cam· and JAS.PAW./SON, Cam·/Bridge; (K) fragments from a green and yellow painted Staffordshire-type figurine; (L) unused wedge shaped gunflint in the form of a modified blade, probably from Brandon in Suffolk and produced c. 1770–1880.
 EG 1770 (Fig. 5.57B). The names of the occupiers of this plot in the late eighteenth century are unknown and there is no particularly plausible candidate for who EG was. Although a number of other bottle seals were recovered from the site, this is the only set of individual’s initials from the site and relates to someone living in Cambridge. The earliest dated surviving English bottle seal is dated 1650 and other examples linked to Cambridge are dated 1678–1752 so this is a relatively late example. There are 10 free blown, colourless, cylindrical medicinal phials with flared lips, four of which are whole (Fig. 5.57C–F). Another phial is mould blown and has a W embossed on the side. The shooting season for grey partridge runs from October to February, while grey heron is resident in Britain all year round and so could have been caught in any season. It would therefore seem that the domestic waste from this feature could represent the only herring gull from the site. At the time that the cellar was backfilled the plot was occupied by six people. As with the chamber pots it therefore appears that this is not domestic household material.

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There are at least six beef joints (c. 65.2kg), seven mutton joints (c. 20.1kg), only one pork joint (c. 4.6kg) and shoulders of lamb appear to be particularly favoured (three joints c. 7.8kg) (Table 5.1). Small quantities of veal, hare and rabbit were also consumed. Pigeon (13 per cent NISP) and chicken (9 per cent) are the most commonly eaten birds. Other birds include goose, domestic and wild duck (i.e. teal/garganey), turkey (represented by two right tarsometatarsi and a carpometacarpus), grey partridge, grey heron (represented by a single tibiotarsus), herring gull and a small species of wader. All of the pigeon and goose bones are from juvenile birds; young pigeons are usually available between May to June.

Chapter 5

Table 5.1. Minimum number of butchery units and meat weights from Soakaway 3.

<table>
<thead>
<tr>
<th>Species/meat</th>
<th>Joint</th>
<th>Total no. bones</th>
<th>MNBU</th>
<th>Estimated meat weight (kg)</th>
<th>Total estimated meat weight (kg) by meat type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle/beef</td>
<td>Thick flank</td>
<td>3 3</td>
<td>27.9</td>
<td>65.2</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td>Neck &amp; clod</td>
<td>1 1</td>
<td>13.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shin</td>
<td>1 1</td>
<td>4.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chuck &amp; blade</td>
<td>1 1</td>
<td>19.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cattle/veal</td>
<td>Chuck &amp; blade</td>
<td>1 1</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep/mutton</td>
<td>Leg</td>
<td>6 3</td>
<td>9.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shoulder</td>
<td>8 2</td>
<td>8.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scrag</td>
<td>1 1</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>?Loin</td>
<td>3 1</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep/lamb</td>
<td>Shoulder</td>
<td>3 3</td>
<td>7.8</td>
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<tr>
<td>Pig (immature)/</td>
<td>Leg</td>
<td>1 1</td>
<td>4.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pork</td>
<td>Hare</td>
<td>8 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rabbit</td>
<td>5 1</td>
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<td>Chicken</td>
<td>11 3</td>
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<tr>
<td>Goose</td>
<td>3 1</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Duck</td>
<td>4 1</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pigeon</td>
<td>16 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>3 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grey partridge</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small wader</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grey heron</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herring gull</td>
<td>5 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>87 34</td>
<td>101.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An unused gunflint (Fig. 5.57L) in the form of a modified blade, probably from Brandon in Suffolk, produced c. 1770–1880 (Hanerkamp & Harris 2005; Kent 1983) may be a casual loss; alternatively, it may have been discarded as obsolete as the caplock mechanism, which used a percussion cap struck by the hammer to set off the main charge, rather than using a piece of flint to strike a steel frizzen, was patented by the Rev. Alexander in 1807. A cylinder made from a mammal long bone with axial and transverse perforations at one end and highly decorated with series of lathe turned incised lines may be a musical toy known as a ‘swanny-whistle’ or ‘water-nightingale’ (Margeson 1993, 213) but is perhaps more likely a bobbin (MacGregor 1985, 183–5). There was also part of a copper alloy purse frame and fragments of a figurine (Fig. 5.57K).
probably moved to the plot c. 1808 and was certainly living there by 1829 (Fig. 5.55). The assemblage deposited in Soakaway 3 is of particular interest because it appears to represent an amalgam of domestic and collegiate material. Furthermore, after 1810 Thomas Wicks was related to the Burbage family of butlers at Emmanuel College who lived next door in Plot XVI; this suggests that familial relationships and the proximity of the two households mean that the assemblage relates to the roles of both cook and butler.

Drains 11–12 were later inserted into Soakaways 3–4 and they thus continued to fulfil a drainage role. Thomas Wicks was interred at the Mill Road cemetery and commemorated on a Celtic cross, which mentioned his wife Mary who had died in 1808 and his second wife Rose who died in 1872. After the death of Thomas Wicks Plot XV was occupied by his widow Rose Wicks (1851–2) and was then owned by their son Claxton/Clayton Wicks until at least 1864. After this the plot was used as mixed domestic and commercial premises; in 1885 there was a building on the frontage with some external stairs to the rear and a garden area with paths.

Plot XVI
This plot was probably occupied by the Burbage family from the late eighteenth century onwards. Charles Burbage, the butler of Emmanuel College between 1828 and 1847 lived there from 1841 to 1847, followed by his mother Anne (1847–8) and his nephew James Burbage (1845–9), who was also the College butler. It was then occupied by a series of businesses and in the 1870s the plot tail was transferred to Plot XVII. Associated with this transition, Cellar 5 was backfilled (MNI 20) and a new brick-lined well – Well 56, which had a domed top and a Scots pine annulus base – was constructed. The remaining plot was only c. 19.5m long and by 1885 it consisted of the frontage building plus a small yard area surrounded by four small ancillary buildings.

Plot XVII
There was relatively little evidence for archaeological activity in Plot XVII in the first half of the nineteenth century, but during the late nineteenth century it went through two major phases of expansion. In the 1870s the plot was extended to c. 61m from the frontage and the majority of Plot XVI, plus an area behind it, was also acquired. At this time the plot was occupied by various members of the Flack family, although it is unclear whether they or the Barrett family (see below) owned the plot. The Flack family ran a number of businesses from the premises, including a Turkish Baths. Although the main structures associated with this business left little trace, some evidence did survive in the form of Buildings 26 and 50.

For the first half of the nineteenth century Plot XVII was owned by Misses Mary Ann and Sophia Bones (1829) and in the mid-nineteenth century it was occupied by baker Samuel Bullock (1841) and then two surgeons, George Johnson (1851–61) and Thomas Lucas (1866–71). The core of Standing Building 25 is eighteenth-century in date, but it was remodelled and extended in the nineteenth century; the windows at the front, for example, are nineteenth-century in date. The south face was covered or constructed during the early nineteenth century using grey bricks in English bond, as was the rear, this time in Flemish bond. This build encloses the southwards extension of the eighteenth-century rear wing. The cellar has two rooms, the smaller to the front. It appears that at least parts of the north wall of the cellar are eighteenth-century in origin, the remainder nineteenth-century; this indicates an expansion at some stage, presumably contemporary with the remodelling.

The Flack family included Walter Flack a plumber, painter and glazier (1874–8), his wife Martha A. Flack a plumber, painter, glazier and lodging house keeper (1881) and their children Charles Walter Flack who ran a music and pianoforte warehouse (1874–80) and Alice M. Flack a teacher of music (1881). Their most significant business was a bathhouse founded in 1874 and known as the Turkish and Other Baths (1874–81) and the University Baths (1881–98). This was managed first by Henry/Harry Morgan who was living at No. 27 (1881–91) and then by H. Lucas (1895). A plan of 1882 shows that there were two rectangular structures that were the ‘Bath Rooms’. The southernmost of these equates to the existing Building 26, which had some drains and a soakaway inserted into it. Further back Building 50 was also constructed. This measured 8.9m long by 5.2m wide and contained a cellar with a boiler at its western end and a brick-lined soakaway at its eastern end; these were connected by an iron water pipe (Fig. 5.58). There was also a chimney and a number of deep brick-lined ‘bunkers’. Building 50 comprised a secondary structure located just behind one of the ‘Bath Rooms’ and it may have been linked to them, although given the range of other business interests of the Flacks it might equally well have fulfilled a range of other roles.

In the area that had previously formed the rear of Plot XVI all existing buildings were demolished, and the area became a large open garden with a greenhouse. The existing Well 43 continued in use, but the water was diverted southwards in a lead pipe. This pipe was later robbed in the late nineteenth century. The robber cut contained metapodia from at least nine sheep, representing waste generated from light tanning activity. At the rear of the garden was situated a rectangular vertically sided flat-bottomed timber-lined structure (Cellar 12). The Turkish Baths continued to operate until c. 1898–1901 and from 1895 onwards parts of the frontage were occupied by a range of other business such as a hairdresser, accountant, house/estate agent and an architect/surveyor. The bunkers and soakaway of Building 50 were backfilled with rubble c. 1882–5; this infill also included some leather shoes, clay pipes produced by Anne Cleaver (active 1858, died 1864) and an object made from pipe clay. There was also a considerable quantity of plain light blue wall plaster, possibly derived from a phase of refurbishment in the Turkish Baths.

The plot then went through another major reorganization c. 1882–5 under the aegis of the Barrett family who acquired Plot XVII c. 1864–81. The Barrett family were china, earthware and glass dealers at various premises in Cambridge between c. 1786–1975 (Fig. 5.59). The business was initially based at Market Hill (1813–1937/58), with warehouse(s) at Jesus Lane that were offered for sale as building material in 1831 as they were replaced by others at St Andrew’s Hill. By 1830 Barrett’s were the largest of the seven ceramic dealers trading in Cambridge and in 1881 the business was known as Barrett & Son with the owners living at 60 Bateman Street and 9 Parker Street.
Figure 5.58. Mid/late nineteenth-century Building 50: (A) plan of mid/late nineteenth-century archaeological features; (B) plan of property in 1882; (C) photograph of the cellar, facing south (plan B courtesy of the Master and Fellows of Emmanuel College Cambridge).
By 1884 the rear of Plot XVII was being directly utilized by the Barrett family, who had managed to create an irregular but contiguous plot stretching c. 106m from St Andrew’s Street to St Andrew’s Hill and covering c. 1405 sq. m. Cellar 12, at the rear of the garden area that was originally part of Plot XVI but was now part of Plot XVII, was backfilled c. 1882–5 and contained over 300 items (MNI) (Figs. 5.60–5.62). The backfilling appears to contain two discernible elements; the majority pertains to the disposal of contemporary material relating to the Barrett family business but there is also some older material. The older material consists primarily of glass bottles of c. 1780–1810, including two bearing the seal of Emmanuel College (Fig. 5.60C–D). Many of the bottles are heavily encrusted with mortar, suggesting that broken bottles had been reused either as part of a foundation or projecting from the top of a wall. The dating and association with Emmanuel College indicates that they derive from features linked to the period when Plot XVI was occupied by Matthew and then Charles Burbage, the butlers at Emmanuel College.

Also possibly linked to the College is a near-complete Martaban-type storage jar (Fig. 5.62D), which was originally used to transport water, oil or some other material from Southeast Asia to Europe. This jar may then have become a curio or collectable, and to judge from the lime-scale present in its interior, eventually served as a water container in the garden. The later Barrett family business material indicates a range of the wares that they sold to the public, such as a pattern with purple transfer-printed cereals (Fig. 5.61A). The business also stocked children’s plates (Fig. 5.61G), some jugs with a classically inspired Trajan pattern (Fig. 5.61K) and high-quality red bodied stoneware (Fig. 5.62B), also classically inspired. There is evidence that the Barrett’s supplied crockery to Charles Barber the cook at Sidney Sussex (Fig. 5.61D), Gonville & Caius College (Fig. 5.61E), Desiree Bruvet the cook at St John’s College (Fig. 5.61F) and an unidentified Cambridge wine and spirit merchant (Fig. 5.61J).

The area was then built over by a series of large structures, Standing Buildings 94–96 (Fig. 5.63), which comprise a set of purpose-built storage and retail spaces for the Barrett family ceramic retailing business. Standing Building 96 was a single-storey structure measuring 13m long and 5m wide, which although substantially rebuilt was based upon and incorporated elements of earlier Buildings 26 and 50. The next structure to be built was Standing Building 95, which was keyied in to the rear wall of Standing Building 96 and ‘sandwiched’

**Figure 5.59.** Images of the Barrett family ceramics and glass business: (A–B) interior views of Barrett & Son Ltd. premises at Plot XVII, c. 1920; (C–D) exterior and interior views of Barrett & Son Ltd. glass, china and hardware shop at No.30 Market Hill, c. 1930 (all photographs courtesy of the Cambridgeshire Collection, Cambridge Central Library).
dirt on the wall of Standing Building 95 caused by earlier exposure. Standing Building 95 was a two-storey structure measuring 15m long by 5.02m wide at ground floor level and 4.15m wide on the first floor. This disparity is accounted for on the north side, where the first floor front wall was stepped back 0.83m (13ft 7½in). The resulting step was mostly taken up with a long skylight providing light to the ground floor and there were also skylights in the roof.

A late nineteenth-century cross-section of Standing Building 95 (Fig. 5.63B) describes it as ‘Messers Barrett & Son New Premises, St Andrew’s St Cambridge’ and the narrower first floor with its hidden skylight and a parapet raised on the south side to hide the pitched roof from view are clearly shown. Both features were still in place at the time of demolition. Located under Standing Building 95, the cellar with a boiler scar at the western end of Building 50 (Fig. 5.58C) continued in use after c. 1882–5 and although sealed at some point in the twentieth century was never backfilled.

Located to the north of Standing Buildings 95–6 was a single-storey brick structure Standing Building 94, which measured over 42m long and 6.7m wide. Its northern and western walls were reused eighteenth-century boundary walls, while its south wall was largely shared with Standing Buildings 95–6, thus demonstrating that it post-dated them. Apart from the roof only a small part of it appeared purpose-built and effectively Standing Building 94 was an expeditiously and cheaply constructed way to create an enclosed and roofed space that involved the minimum possible new construction by placing a cleverly designed roof between several existing walls. These were partly garden/yard boundaries and partly the walls of adjacent structures, thereby creating a building the full width of the available plot. The nineteenth-century cross-section of Standing Building 95 (Fig. 5.63B) depicts a more complicated building in this location, indicating that the final form of Standing Building 94 was simplified. A 1920s photograph of the interior shows that the rear of Standing Buildings 94 and 96 were open together to form the shop floor. To the west of Standing Building 95 were some later and much less substantial concrete footings, Building 51 (MNI 187); these footings incorporated a large quantity of pottery as hardcore dating to c. 1882–1900 and presumably relating to the Barrett family business. Overall, the impression is that Standing Buildings 94–96 and Building 51 represent a largely successful attempt to maximize storage and retail space at the lowest possible cost.

Plot XVIII
Sometime in the early nineteenth century a particularly deep brick-lined well, Well 57, plus an associated structure, Building 52, was constructed. Pre-existing Cellar 7 was substantially modified c. 1820–30; it was reduced in size and had an arch and chute inserted into one end (Fig. 5.64). Associated with this remodelling event was some refuse (MNI 78) including two cats and a kitten plus a char dish (Fig. 5.64F). The char dish plus a potted game container (Fig. 5.64E) emphasize how increasingly meat consumption might have no faunal correlate in the archaeological record. At around the same time Cesspit 17 was backfilled with rubble, plus parts of a single large stoneware jar or bottle. By 1830 buildings extended along the northern side of the plot almost all the way to the back. The remaining part of Cellar 7 was backfilled c. 1830–50 and domestic refuse associated with its infilling (MNI 49) included a plate belonging to an unidentified individual with the initials PL, a red stoneware teapot, a wine glass (Fig. 5.64G) and a clay tobacco dirt on the wall of Standing Building 95 caused by earlier exposure.

Figure 5.60. Emmanuel College bottles: (A–B) complete bottles from the Douglas Finlay Museum of College Life of Emmanuel with seals that read EMANUEL COLLEGE; (C–D) oval seals which read EMANUEL/ COLLEGE and EMANUAL/COLLEGE from the c. 1882–5 backfilling of Cellar 12, one has an incomplete base kick probably with glass tipped pontil scar ([40023]); (E) a black glass seal which reads EMAN./COLL found at Emmanuel College, probably early nineteenth century in date.
Figure 5.61. Ceramics recovered from the backfilling of Cellar 12, c. 1882–5: (A) whiteware plate with mulberry or purple transfer-printed cereals pattern ([40023]); (B) whiteware Asiatic Pheasant pattern serving dish ([40023]); (C) whiteware bowl with brown transfer-printed floral pattern named BOUQUET ([40023]); (D) ornately decorated whiteware sauceboat marked C BARBER ([40023]); (E) whiteware plate with a black transfer-printed scene of Gonville & Caius College Court ([40023]); (F) whiteware plate with mulberry or purple transfer-printed crest of St John’s College, the reverse is marked D.BRU[ET] ([40042]); (G) child’s whiteware plate with an alphabet border and an unidentified black transfer-printed design ([40042]); (H) bone china saucer with gilt tea leaf ([40023]); (I) Nottinghamshire/Derbyshire-type stoneware bowl ([40023]); (J) large Utilitarian English stoneware bottle with a domed top labelled …Mark…/[CA]MBRIDGE., from an unidentified local alcohol retailer ([40042]); (K) whiteware jug with black transfer-printed Trajan pattern hunting scene ([40023]); (L–M) Utilitarian English Stoneware ink bottles manufactured by Bourne & Son of Denby ([40023]).
Figure 5.62. Photographs and drawing of nineteenth–twentieth-century ceramics, including: (A) a pearlware jug with moulded and hand-painted decoration in the Pratt style of ‘The Sailor’s Return and Farewell’ from the backfilling of Cellar 4, c. 1830–45; (B) a red bodied stoneware with gilt bands and a white and pale classical scene on a black background, which may be a Wedgwood product, from the backfilling of Cellar 12, c. 1882–5; (C) a Booth’s silicon china Pomadour pattern dessert plate with red, blue and green transfer-printed floral decoration from the backfilling of Cellar 13, c. 1913–21; (D) a Martaban-type storage jar with a celadon coloured glaze, stamped with the Chinese boar symbol from the backfilling of Cellar 12, c. 1882–5; (E) ‘Art’ earthenware inscribed Castle Hedingham/East/Anglia/6 from the backfilling of Cellar 13 in c. 1913–21.
Figure 5.63. Standing Buildings 94–6, constructed c. 1882–5: (A) plans of Standing Buildings 94–6; (B) 1880s cross-section through Standing Building 95; (C) photograph of Standing Building 95 as revealed during demolition, facing southeast; (D) north elevation of Standing Building 94; (E) cross-section through Standing Building 95 (B courtesy of the Master and Fellows of Emmanuel College Cambridge).
pipe produced by Robert Nutter, known to have been active c. 1841. After this a brick floor was constructed over the cellar’s remains and the building above continued in use. By the late nineteenth century, however, part of the floor had subsided into the backfilled cellar and the building was modified once again.

This plot was occupied by a butcher in 1841 and then by a series of bakers from c. 1851 onwards. By 1855 the plot has heavily built over. Many of the new structures were built in the 1840s or 1850s as they included a specialized bake house oven with ‘covered flues’ but this had left no trace. A small pit, Pit 62, was dug c. 1875–1900 to dispose of some domestic refuse (MNI 15) including a potted game container (Fig. 5.6E). Developments in the 1880s at Plot XVII meant that Plot XVIII was partially enclosed by substantial walls and by 1885 the garden had been built over.

Plot XIX
In the 1830s the plot tail of the northern part of Plot XIX was redeveloped into a series of 11 small buildings, collectively known as St Andrew’s Court. This comprised an expansion of the five cottages that had existed here since 1771 and represents the creation of a small area of ‘slumland’ (Mayne & Murray 2001). These buildings had shallow footings and only fragments of these survived as Building 53, demonstrating that the individual structures were c. 5.5m wide by 4.5m deep. They consisted of a single ground floor room plus one or two upstairs bedrooms and each structure had its own separate WC and small open area. The development generally had c. 35–40 occupants at any time and was inhabited by relatively poor working class families, including lower status College servants such as bedmakers.

Plot XX
The Birdbolt Inn at Plot XX continued to develop as a coaching inn for much of the nineteenth century. By 1881 it had become a temperance hotel, but this ceased trading in 1898, bringing to an end a 420-year tradition as an inn. The plot was then briefly occupied by a tailors and robemakers and several other businesses. The only archaeological feature was a particularly deep brick-lined well, Well 58, which was presumably linked to the large quantities of water that the inn required, particularly for the numbers of horses that the stables on the site suggest.

**Figure 5.64 (opposite). Plot XVIII: (A–D) mid–late eighteenth-century brick-lined Cellar 7, backfilled in two stages c. 1820–30 and c. 1830–50: (A) section of the cellar; (B) photograph of cellar, facing southeast; (C) photograph of arch and chute in western wall, facing west; (D) photograph of collapsed floor, facing west; (E) a whiteware lid with green transfer-printed decoration, which reads POTTED GAME, SO H... BREAKFAST LUNCHEON & ... RW from Pit 62 c. 1873–1900 ([31207]); (F) small shallow tin-glazed earthenware char dish with polychrome decoration in a fish design, probably made in Liverpool which specialized in these pots by this date (Archer 1997, 320), from Cellar 7 ([31430]) c. 1820–30; (G) a colourless drinking glass with brown patina, consisting of a conical bowl with panel moulding on the lower half (13 panels) and a plain upper half to lip. Very short stem with bladed knop and solid conical foot, late eighteenth–early nineteenth-century from Cellar 7 ([31588]) c. 1830–50.**

Plot XXII
Throughout the medieval and post-medieval periods Plot XXII had remained a largely open area. This began to change in the late seventeenth and eighteenth centuries (see above), but it was in the nineteenth century that this situation altered fundamentally and Plot XXII became one of the most archaeologically ‘active’ areas in the street block. This was primarily because its lack of earlier development meant that when pressures on space increased during the late nineteenth century it presented a significant opportunity, paralleled only by the large garden area that was developed by Robert Sayle (below). The Purchas family continued to own at least part of Plot XXII until 1829, although their fortunes were in decline, and by 1830 the plot was rather more densely built-up than in the late eighteenth century but not fundamentally altered. The only archaeological feature of c. 1800–30 was brick-lined Well 55. The plot then came into the hands of two local spinsters, Misses Mary Ann and Sophia Bones, who died at some point between 1841 and 1851. In c. 1830–45 and probably c. 1844–5 the area was transformed, and although the Cock Inn continued to exist it shrank and lay outside the investigated area. It is unclear whether this change took place under the aegis of the Bones sisters, although it is perhaps more likely that it took place under their successors who may have been the Barrett family.

The first stage in the construction of Corn Exchange Court was the demolition of the existing above ground structures and the backfilling of various features including Cellar 4 (Figs. 5.37, 5.65–5.69, 7.2R and 7.3). This feature contained one of the largest and most diverse nineteenth-century assemblages from the site (MNI 290, or 343 if shellfish are included), which is linked to an inn as well as several Colleges. As this material has been published in detail elsewhere (Cessford 2014a), only an overview will be presented here. The backfilling of Cellar 4 involved the dumping of c. 3.1 cubic m of material. The primary constituent of the infill was building debris, consisting of crushed mortar and hundreds of brick and tile fragments, some of which were of the same fabric as the walls of the cellar while others appear to derive from the demolition of different structures elsewhere on the plot. There was also a considerable quantity of ash, charcoal and cinder. The material culture that was recovered was dominated by pottery (MNI 205), plus glass vessels (MNI 13), bone (46 MNB1, plus 5 others) and edible shellfish (MNI 193), plus some clay tobacco pipes (MNI 10), a small amount of window glass, some heavily corroded and unidentifiable iron fragments plus the iron portion of the heel of a shoe, part of a ceramic figurine, two bone knife handles, a whetstone, a small bone button and four copper alloy objects.

Despite the plot’s known association with the Cock Inn relatively few items were recovered that appear to be inn-related. The most obvious was a half pint capacity stoneware tankard-shaped jug with a pinched spout and an ale measure mark consisting of a crown over the initials WR. This was in compliance with the act for ascertaining the measures for retailing ale and beer of 1700, which covered vessels of up to a quart capacity used in inns and other commercial establishments and was in force until 1876 (Bimson 1970). There were also several tankards (MNI eight), principally of creamware (MNI 5), and English stoneware probably from London (MNI three) as well as two nearly complete Staffordshire-type slipware two-handled cups. Also present were two complete stoneware bottles, probably from Frechen, whose stoneware industry declined in importance in the seventeenth century but continued into the 1850s. These are relatively unusual finds in Cambridge, with only one other eighteenth–nineteenth-century vessel from Grand Arcade that is substantially complete. 11 chamber pots plus a stool pan were also recovered. These are probably also linked to the inn, as the large number of these vessels indicates a level of requirement higher than that of a domestic household. The overall assemblage, however, lacks many of the distinctive characteristics normally found in inn/tavern related assemblages such as a high
vessels date to c. 1760. A number of the plates and other dining vessels were marked with the hand-painted or transfer-printed names of Colleges or College cooks. The earliest of these, dated c. 1770–85, were a creamware dish or deep plate with Royal pattern rim marked Trinity Hall on underside of base in underglaze blue writing and impressed maker’s mark A ([30102], [30108]); (B) creamware vessel of unknown form marked TRINETY H… on underside of base in underglaze blue writing ([30102]); (C) creamware plate with Royal pattern rim marked CAI… for Gonville & Caius College on underside of base in underglaze blue writing ([30102], [30108]); (D) pearlware plate marked B F Tunw[ell] on underside of base in underglaze blue writing, with impressed maker’s mark IH ([30101], [30108]); (E) creamware plate with a Queen’s shape edge marked Scott in underglaze hand-painted blue on the upper side of the rim ([30102], [30108]); (F) creamware plate marked B Leach on underside of base in underglaze blue writing ([30102]).

Figure 5.65. College-associated material from the backfilling of Cellar 4, c. 1830–45, including: (A) creamware dish or deep plate with Royal pattern rim with Trinity Hall on underside of base in underglaze blue writing and impressed maker’s mark A ([30102], [30108]); (B) creamware vessel of unknown form marked TRINETY H… on underside of base in underglaze blue writing ([30102]); (C) creamware plate with Royal pattern rim marked CAI… for Gonville & Caius College on underside of base in underglaze blue writing ([30102], [30108]); (D) pearlware plate marked B F Tunw[ell] on underside of base in underglaze blue writing, with impressed maker’s mark IH ([30101], [30108]); (E) creamware plate with a Queen’s shape edge marked Scott in underglaze hand-painted blue on the upper side of the rim ([30102], [30108]); (F) creamware plate marked B Leach on underside of base in underglaze blue writing ([30102]).

The ceramics (EVE 74.97, EVE per MNI 0.37) are dominated in terms of fabric by pearlware (MNI 75) and creamware (MNI 57) and functionally by dining (MNI 66) and tea drinking (MNI 61). Both the creamware and the pearlware exhibit a wide range of variation in fabric and rim form, indicating that the material was not purchased as a single group but represents a collection accumulated over time. Nearly 40 per cent of the material related to dining. This group mainly dates to c. 1770 or later although a single creamware plate with a richer darker yellow fabric and two Chinese export porcelain vessels date to c. 1760. A number of the plates and other dining vessels were marked with the hand-painted or transfer-printed names of Colleges or College cooks. The earliest of these, dated c. 1770–85, were a creamware dish or deep plate with Royal pattern rim marked Trinity Hall, plus an impressed maker’s mark A, (Fig. 5.65A) and a further vessel of unknown form that was probably a plate was marked TRINETY H… (Fig. 5.65B). There was also a plate with Royal pattern rim marked CAI… (Fig. 5.65C) for Gonville & Caius College.

A pearlware plate with underglaze blue lettering B F Tunw… on the base and with the impressed mark IH (Fig. 5.65E) can be linked to Bates Francis Tunwell, an apprentice cook at Emmanuel College in 1782 under his father Thomas and then himself the College cook 1794–1806. A fragment of another plate also bears the impressed mark IH; these were manufactured by John Harrison of Stoke who is listed in directories of 1781–3 (Pomfret 2008). A creamware plate
with a Queens shape edge-marked Scott (Fig. 5.65D) probably relates to a cook called William Scott (c. 1779–94). This plate is notable as the name is painted on the upper side of the rim rather than on the underside of the base as in the other cases, making it much more visible. There was also another creamware plate marked B•Leach (Fig. 5.65F), a name more commonly represented on vessels in some other nearby features. This belonged to Barnard/Barnett Leach III and

IV, two generations of a family who were cooks at Trinity College (1770–1812) (see Fig. 7.3).

The most common name was R Hopkins, found on eight plates, a dish and a bowl belonging to Richard Hopkins, a cook at both Gonville & Caius College and Trinity Hall (c. 1805–12) (Fig. 5.66). The plates all have a similar moulding and blue hand-painted shell-edged Rococo decoration, but on some the name

Figure 5.66. Vessels of Richard Hopkins from the backfilling of Cellar 4, c. 1830–45, including: (A–E) creamware plates with shell-edged rims marked R Hopkins on underside of base in underglaze blue writing, with impressed maker’s marks TURNER and TURNER 5 ([30102], [30108]); (F–G) creamware plates marked R Hopkins on underside of base in transfer-printed blue writing, with impressed maker’s marks TURNER and TURNER 5 ([30100], [30102], [30108]); (H) plain creamware bowl with R Hopkins on underside of base in transfer-printed blue writing ([30102], [30108]).
is hand-painted while on the others it is transfer-printed. This style of moulding and decoration has been found associated with other College cooks including Thomas Wicks (Emmanuel College, 1807–51), William Spencer (Christ’s College, 1795–1833) and John Barnes (College unknown, 1814–19). The hand-painted examples are probably earlier and consist of an oval dish, three plates and a single smaller plate. All these vessels have the impressed mark TURNER and one is marked TURNER 5, manufactured by Turners of Longton who were among the best and most successful potters in the late eighteenth and early nineteenth centuries (Hillier 1965).

There are five plates with the transfer-printed name R HOPKINS, three of which are impressed TURNER 5 and one is impressed TURNER. The number 5 clearly does not relate to diameter and probably relates to rim form. The transfer printing is generally quite poor quality; this technique was invented shortly after 1750 but remained rare for a considerable period. The investment required to create the transfer print indicates that Hopkins must have commissioned a large number of vessels from Turner’s. R Hopkins is Richard Hopkins, who was a cook for Gonville & Caius College by 1805 and when he died in 1810 he was the cook for both Trinity Hall and Gonville & Caius. His widow Sarah succeeded him by 1812, but resigned in 1818. There is another creamware plate with impressed mark TURNER, two plates whose fabric suggests that they were made by Turner’s and a piece of creamware with the impressed mark CB (Charles Bourne of Fenton c. 1807–30).

While the dining vessels are mainly undecorated, the tea drinking vessels (Fig. 5.67) are dominated by pearlware vessels (MNI 42), with a mixture of hand-painted and transfer-printed blue and white decoration principally of oriental scenes. Some English soft paste porcelain vessels (MNI 51) and Chinese export porcelain (MNI three) vessels are similarly decorated. There are individually matching saucers and teacups or bowls, but no larger services and the impression is of a collection accumulated over a considerable period. Two pearlware tea bowls that were over 90 per cent complete with multiple refitting sherds were decorated with black transfer-printed Oriental scenes (Fig. 5.67L–M). These pieces cannot be earlier than 1828, as it was only then that potters discovered that black designs could be applied in underglaze without distortion by earlier than 1828, as it was only then that potters discovered that black designs could be applied in underglaze without distortion by

**Figure 5.67 (opposite).** Tea and coffee drinking related vessels from the backfilling of Cellar 4, c. 1830–45: (A) black basalt teapot lid ([30101]); (B) pearlware teapot with blue hand-painted floral decoration ([30099]); (C) mocha pattern pearlware cup with blue and brown bands ([30101], [30102]); (D) pearlware coffee can with hand-painted blue, yellow, brown and pale orange/brown stars and lines in Pratt ware style ([30102]); (E) English soft paste porcelain slops bowl with hand-painted blue scene ([30060], [30100], [30101]); (F) pearlware blue transfer-printed saucer with oriental scene ([30102]); (G) pearlware blue transfer-printed saucer with oriental scene ([30102]); (H) pearlware blue transfer-printed teacup with oriental scene ([30102]); (I) pearlware blue transfer-printed teacup or bowl with willow pattern scene ([30102]); (J) pearlware tea cup or bowl with black transfer-printed oriental scene ([30101], [30102]); (K) pearlware tea cup or bowl with hand-painted scenic decoration ([30101]); (L) pearlware tea bowl with black transfer-printed oriental scene ([30102], [30108]).

mixing the powdered enamel colours with Barbadoes tar (*Pisseleon Indicum*) (Majewski & O’Brien 1987, 142). This is the latest dateable material in the assemblage.

There were also a several distinctively ‘personal’ items, including a pearlware jug (Fig. 5.62A) with moulded and hand-painted Pratt style decoration of ‘The Sailor’s Return and Farewell’ (Lewis & Lewis 2006, 15, 156). This shows two scenes, first of the departing sailor and his lass waving goodbye with his ship in the background and later the returning sailor consoling his girl who has wed another in his absence. There was also a creamware cup with hand-painted text ‘…r my de.. which probably read ‘A present for my dear boy/girl’ (Fig. 5.68A), a creamware miniature watering can with hand-painted red and green floral decoration ([30102]); (C) green iron-shaped Staffordshire-type figurine base ([30102], [30108]).

Vessel glass was relatively rare and is composed of late eighteenth–early nineteenth-century pharmaceutical phials (MNI 10), which are relatively complete despite their fragility, plus utility bottles (MNI three), one of which of c. 1780–1810 is whole. There were fragments of at least 10 clay tobacco pipes, five were of bowls of c. 1730–80 and there was a stem marked PAWSON CAMB, manufactured by either James Pawson (active 1786, died 1813) or...
his his widow Anne Pawson (active 1813, died 1823). The copper alloy objects included an eighteenth-century Rococo style furniture drop handle, two simple rings and a plate with pierced decoration. A broken square-sectioned rectangular whetstone tapers slightly towards one end and is worn round (chamfered at the edges) along its length, made of Permian sandstone.

Overall, 252 of the 1217 bones from the cellar were identified. They represent a mixture of butchery (55 per cent) and domestic waste (31 per cent). Sheep bones are relatively common (27 per cent NISP), followed by cattle (24 per cent) and pig (17 per cent). Of note amongst the butchery waste are the relatively large numbers of cattle phalanges (70 per cent of the total cattle bone assemblage) and sheep mandibles (29 per cent of the total sheep bone assemblage). The domestic refuse includes at least 43 meat joints and one portion of crabmeat. There are nine beef joints (c. 82.95kg), 12 mutton joints (c. 52.2kg), four pork joints (c. 15kg) and two lamb joints (c. 5.2kg), as well as seven chickens, six ducks, a goose, a pigeon and a teal/garganey. Very few fish bones were present, just one each from a salmon and a trout. Edible shellfish included mussels (MNI 90), oysters (MNI 78) and cockles (MNI 25), although these only represent c. 0.6kg of meat. There were also some bones that do not relate to food waste. Cat bones (11 per cent NISP) represent a minimum of one adult and two juveniles and are scattered between three separate fills, with no signs of butchering or gnawing. There were at least two corvids that are probably crow/rook; these species act as scavengers and are generally not eaten (Albarella & Thomas 2002, 33; Dobney et al. 1996, 52; Serjeantson 2000, 184).

In addition to the infilling of Cellar 4, two smaller features were also backfilled at around the same time. Firstly, timber-lined Pit 63 (MNI 97) contained vessels associated with Gonville & Caius College and the cook Barnard/Barnett Leach as part of an ointment pot for Singleton’s golden eye ointment. Secondly, Pit 64 (MNI 31) contained a vessel linked to the cook Richard Hopkins. An adult dog with an estimated shoulder height of c. 55cm was also buried on the edge of the plot in ADP 14; in the fill were parts of a small bowl also linked to Hopkins. These three groups of backfilling material, in Cellar 4 and Pits 63–64, although of very different quantities are relatively similar, particularly in terms of the ceramic vessels. The dating of these deposits is uncertain, although Cellar 4 must date to 1828 or later and the smaller groups are of similar origin. The assemblages are very similar in terms of vessel fabric, form etc. although no cross-fits were identified between features. There are also more specific links, such as the presence of vessels linked to Gonville & Caius College in two of the features. If all three assemblages were deposited at the same time this would represent c. 280 ceramic vessels. The presence of similar material in ADP 14 and the surrounding garden soil, only a small proportion of which was investigated, indicates that much more material was not recovered. These assemblages therefore represent a palimpsest of material that built up over time (Fig. 5.69).

Identifiable elements include:

1) Mid-eighteenth-century vessels, including Chinese export porcelain of c. 1730–60, curated for almost a century.
2) Early College ceramics, plates with the names of Trinity Hall and Gonville & Caius College. This material dates to c. 1770–85 and is likely to have passed into the possession of Richard Hopkins, a later cook at both colleges.
3) Plates and a bowl of Barnett/Barnett Leach senior and junior of Trinity College 1770–1812. The Leach and Hopkins families had been linked by marriage in 1787, when Richard Hopkins was a witness, so it is likely that some Leach crockery was passed to the Hopkins c. 1812–14.
4) A plate of a cook named Scott, of St John’s College.
5) A plate of Bates Francis Tunwell, Emmanuel College cook 1794–1806.
6) Plates and a bowl of Richard Hopkins, cook for both Gonville & Caius College and Trinity Hall 1805–10, probably used by his widow until 1818.
7) Items likely to be personal possessions rather than business related.
8) Material associated with the Cock Inn.
9) Material derived from a midden or similar context.

The majority of the items unfortunately lack the distinctive elements necessary to assign them to a particular group. It is notable that the majority of the vessels were of some age when deposited, but their completeness and sherd size strongly indicate against any form of middening etc. for most of the material. It seems likely that the backfilling material in the cellar and other features represents the disposal in the early 1840s of material belonging to a College cook that was considered out of date and no longer wanted. This collection built up over time, passing from cook to cook and many elements were c. 50 years old. Although the bulk of the assemblage related to the activities of College cooks, some was inn-related and we know that the two trades were closely linked in Cambridge. There was also more personal and domestic material; this is unsurprising as College cooks business and domestic premises were usually the same. One scenario is that the material was used by Richard Hopkins (1805–10) and later Sarah Hopkins (1810–18). The Hopkins family had premises on Slaughter House Lane by 1801 and between 1816–31 Sarah was a partner in a brewers and brawn manufacturers on the same lane. In 1843 Sarah Hopkins, who was living nearby at Pembroke Place, died aged 74. At the time she was a wealthy woman, owning two breweries, two maltings, 14 inns and public houses, several cottages, accommodations and land. Her death took place just before the probable construction of Corn Exchange Court in c. 1844–45 and suggests that a significant proportion of the backfilling material represents the clearance of material that Sarah had accumulated.

Following the backfilling of these earlier features, the buildings of Corn Exchange Court, Buildings 55, were constructed (Fig. 5.70). These structures all had relatively shallow and ephemeral brick-built footings that did not survive well. Corn Exchange Court consisted of nine ‘cottages’. Numbers 1–3 were located some distance away, closer to St Andrew’s Hill, while 4–9 formed a row that fell partially within the excavated area with part of 5 and all of 6–9 being present. This rear portion of Corn Exchange Court measured 96ft (29.3m) long by 29ft 8in–31ft 6in (9.0–9.6m) wide. This would make each plot c. 15ft 4in (4.9m) wide and as they were 3.85m deep, each covered c. 18.9 sq. m. Each tenement appears to have consisted of a single ground floor room with one or two bedrooms upstairs.

To the south of the buildings was a path with a small yard at the end, while on the opposite side of the path were gardens containing three two-celled WC structures. Two of these were identified archaeologically and they measured c. 3.0m long by 0.9m wide (Water Closets 2–3). Pre-existing Well 55 lay under the garden wall and fed a pump located outside Corn Exchange Court. As a result, replacement brick-lined Well 54 was constructed. Although Corn Exchange Court might be thought of as a densely packed slum-type development, the provision of small gardens plus three two-celled WC blocks – effectively one WC per cottage – and a new well, suggests that they were relatively well catered for in terms of amenities. Numbers 5–9 Corn Exchange Court generally had around 15 occupants in total, and occasionally more than one household occupied a single premises. The occupations of the inhabitants included baker, butcher, carter, coachman, domestic servant, dressmaker, flyman, groom, nurse, omnibus driver, schoolmistress, solicitor’s clerk and tailor.

Just to the south of Corn Exchange Court was a small area accessed by the same passageway. A semi-celled structure located in this area, Building 49 (Fig. 5.71), was backfilled c. 1879–82 when this part of the plot was owned by the Barrett family. Incorporated into its backfilling (MNI 249) were large quantities of ceramics (Figs.
Figure 5.69. The origins of the collegiate ceramics in Cellar 4 and the temporality of the assemblage.
Chapter 5

A

B Building
F Foundation
P Pit
W Well
WC Water closet

B

Pump ▲
1885 OS

A Horseshoes
B Wire
C Dog

0 20
metres

C

D

Corn Exchange Court
1 2 3

4 5 6 7 8 9
Figure 5.70 (opposite). Plans of Corn Exchange Court, which was created c. 1844–5: (A) archaeology of initial residential phase c. 1844/45–87; (B) archaeology of secondary business phase c. 1887–1900; (C) plan of 1882; (D) 1st edition Ordnance Survey map surveyed in 1885 (plan C courtesy of the Master and Fellows of Emmanuel College Cambridge).

Figure 5.71 (above). Early–mid-nineteenth-century Building 49 plus material recovered from its backfilling in c. 1879–82 ([40000]): (A) the building as exposed during the excavation, facing southeast; (B) white feldspathic stoneware teapot with an 1867 diamond registration mark of William Taylor Copeland & Sons; (C–D) whiteware vessels with black transfer-printed floral PARISIENNE pattern and four petalled flower maker’s mark; (E) whiteware plate with pink transfer-printed mark CAMBRIDGE in a garter and …ILUM.
Figure 5.72. Ceramics from backfilling of Building 49 c. 1879–82 ([40000]): (A–F) Sunderland-type earthenware; (A) bowl with clubbed rim, which is glazed internally and externally with black glaze; (B) jar with two horizontal side loop handles and clubbed rim and internal black glaze; (C) jar glazed internally and externally with black glaze; (D) jar with internal black glaze; (E) flared bowl with rolled rim and internal brown glaze plus white glaze on the rim exterior; (F) flared bowl with clubbed rim and internal brown glaze; (G–K) children’s whiteware cups; (G) mulberry/purple transfer-printed alphabet cup; (H) mulberry/purple transfer-printed cup with biblical text from Matthew 5:44; (I) mulberry/purple transfer-printed cup with a scene of children playing with biblical texts from Jeremiah 3:4 and Psalm 119:105; (J) black transfer-printed cup with the fourth commandment (Exodus 20:8) REME[MBER] THE SABBATH DAY TO KEEP IT HOLY; (K) pink transfer-printed cup.
By 1887 the rear portion of Corn Exchange Court had ceased to be used as residential premises and had become a horse stables and workshop. In the 1890s this area was used by Thomas Newton, who had a carpenter’s, glazier’s and painter’s workshop and William Chapman, who ran a builder’s, carpenter’s, joiner’s and undertaker’s workshop.

In 1882 this area contained a workshop, office, shop and yard, but by 1885 the yard had been transferred to Plot XVII.

Figure 5.73. Torpedo-shaped utility bottles recovered from the construction fill of ‘H’-shaped brick Foundation 3, c. 1884–90, showing: (A) identified bottle sources; (B) the known career of Samuel Ekin 1814–93; (C) bottle embossed J. SCHWEPPES & Co/GENUINE SUPERIOR/AERATED WATERS/51 BERNERS STREET/OXFORD STREET, length 8in ([40115]); (D) bottle embossed [WILLIAM MAYO]/[LATE]/[DE GRUC]/[HY & MAYO’S]/[CELEBRATED]/[SODA WATER]/[17 SILVER STREET]/[CITY]/[LONDON]/[ESTABLISHED 1808] ([40115]); (E) bottle embossed S.P.EKIN/Genuine/[SUPERIOR]/[AERATED]/[WATERS]/[Cambridge] ([40115]); (F) bottle embossed LAWS & Co/LYNN/SUPERIOR in slightly recessed boxes ([40143]).

By 1887 the rear portion of Corn Exchange Court had ceased to be used as residential premises and had become a horse stables and workshop. In the 1890s this area was used by Thomas Newton, who had a carpenter’s, glazier’s and painter’s workshop and William Chapman, who ran a builder’s, carpenter’s, joiner’s and undertaker’s workshop. Well 55, which served the plot to the south, was filled in but Well 54 continued in use. The row of cottages remained standing, but their internal divisions were removed and an ‘H’-shaped brick...
Chapter 5

5.73E), born in Huntingdon c. 1814 who had moved to Cambridge by 1834 and in 1846 was a soda water manufacturer at 10 King’s Parade.

Foundation with an associated rubble base, Foundation 3, was created to support a piece of machinery. The rubble base (MNI 156) included 151 Hamilton soda water bottles, with 20 from the Schweppes company (Fig. 5.73C) and 16 of William Mayo (Fig. 5.73D), both based in London. Five other London businesses are represented by seven bottles in total. There were also 17 bottles of Samuel Perby Ekin (Fig. 5.73E), born in Huntingdon c. 1814 who had moved to Cambridge by 1834 and in 1846 was a soda water manufacturer at 10 King’s Parade.

In 1850 Samuel Ekin was working at Corn Exchange Street and in 1851 he was living with his wife Mary Ann, born in London c. 1814, plus a servant at 47 Eden Street. Samuel Ekin’s business does not appear to have survived long into the 1850s in Cambridge, and

Figure 5.74. Ceramics from plank-lined Pit 67, backfilled c. 1881–1900 ([40149]): (A) wide-mouthed Keiller marmalade whiteware jar with black transfer-printed decoration of oak wreath and text JAMES KEILLER & SONS DUNDEE MARMALADE/GRAND MEDAL OF MERIT VIENNA 1873/ONLY PRIZE MEDAL FOR MARMALADE/ LONDON, 1862, plus batch letter O possibly indicating production c. 1888; (B) plain wide-mouthed whiteware jar with text MALLING/NEWCASTLE/2lb on base; (C) wide-mouthed whiteware jar with vertical ribs; (D) plain wide-mouthed whiteware jar; (E) whiteware WC bowl decorated on the inside with a blue transfer-printed landscape scene; (F) plain whiteware washbasin stamped GILDEA & WALKER/18IN, manufactured by Gildea and Walker at Burslem Stoke-on-Trent (1881–85); (G) Utilitarian English stoneware bottle with a domed top stamped W H [APTHORPE] /LATE…./ WINE & SPI[RIT MERCHANT] /CAMB[IDGE].
he soon changed career which meant that the bottles were several decades old when reused as rubble. One other bottle came from King’s Lynn (Fig. 5.73F). The large number of Hamilton bottles indicates that this is a commercial assemblage, as the quantity is too large for domestic usage. The deposit dates to c. 1880–1900; at this time the Hamilton bottle was being superseded by the Codd bottle, which was invented by Hiram Codd of Camberwell in 1872 and patented in 1875 and became the dominant form in the 1880s (Talbot 1974). The assemblage therefore represents obsolete material and includes material relating to Samuel Ekin, whom we know was based at Corn Exchange Street in 1850, plus a considerable quantity from London businesses, while the single King’s Lynn example is perhaps best interpreted as a stray item indicative of riverine contacts. The only local Cambridge bottles relate to a business that had not existed for c. 30 years, while the others come from some distance suggesting that the bottles may represent those that could not be returned to redeem the deposit.

A number of pits were dug in the garden area of Corn Exchange Court; Pit 65 (c. 1880–1900, MNI 95) contained at least 37 horseshoes, a padlock, 31 pharmaceutical bottles, a cup with part of a name reading J.C.... and a large stoneware bottle marked ...E/ [Mer]chant/....ET of an unidentified wine and spirit merchant presumably based in Newmarket. Another small pit, Pit 66 (c. 1880–1900), was almost entirely filled with over 400 fragments of iron wire. A larger planked-lined vertically sided flat-bottomed square pit, Pit 67 (c. 1881–1900 and probably c. 1892–1900, MNI 95), contained around a dozen metal paint cans. There were also 24 wide-mouthed ceramic jars, including eight Keiller Marmalade jars (Fig. 5.74A), many of which had residues indicating that they were reused as paint containers.

Also present were substantial proportions of two large WC bowls decorated on the inside with a blue transfer-printed landscape scene (Fig. 5.74E) and a large plain washbasin manufactured by Gildea & Walker (Fig. 5.74F). Other items included a large vertically sided Utilitarian English stoneware bottle with a domed top that would have held around four gallons (Fig. 5.74G) and can be linked to William Henry Apthorpe junior, a brewer and wine and spirit merchant in Cambridge born c. 1835 who was in business c. 1871–95.

A substantial proportion of the material from this pit is linked to painting, in the form of ceramic wide mouth jars and tins used to contain red, blue and green paint. This suggests that the material is linked to Thomas Newton, a glazier and painter who was present in 1895. The presence of the two toilets and a wash basin suggests that one of the two three-celled WC blocks of Corn Exchange Court may have been demolished as the area became progressively less domestic and more commercial in nature.

**Twentieth century**

After the many highlights of the nineteenth century, the twentieth century represents something of an anti-climax. Although the archaeology of this period is a fast-growing area of interest, there remains a strong focus upon a limited number of specialized fields, such as military remains; the ‘mundane and ordinary things’ of the twentieth century have not yet been fully accepted into the archaeological mainstream (Schofield 2009, 391), although exceptions are beginning to appear (Boothroyd 2009; Casella & Croucher 2010; Cessford 2012; Cessford 2013b, 100–8). During the twentieth century the nature of the archaeological remains at the Grand Arcade street block changed markedly. In comparison to the nineteenth century, relatively few ‘feature groups’ were present; of those that were encountered, two were associated with the Robert Sayle department store (see below).

In contrast to the paucity of archaeological remains, the number of standing buildings – including those that were constructed during the eighteenth–nineteenth centuries, all of which underwent numerous modifications in the twentieth century – multiplied exponentially (Fig. 5.75); it is these structures that dominate our understanding of the street block during this period. Although fully recorded, the bulk of the twentieth-century buildings are of similar form and construction; as the majority are of limited interest, only the most representative examples will be discussed. Similarly, while ample twentieth-century documentary, cartographic and photographic evidence survives, the surfeit of material means that such evidence will only be presented where pertinent to the archaeological remains. Running counter to this pattern, however, the fact that most census returns are not available under the 100-year rule means that after 1911 this detailed and highly valuable data cannot be employed.

Over the course of the twentieth century the Grand Arcade street block became increasingly commercial in nature. No longer were any plots exclusively residential in focus and – excluding live-in staff at Robert Sayle (see further below) – by the end of the century the only inhabitants were students who resided on the upper floors of some of the College-owned properties. The following account presents the twentieth-century remains in a relatively broad-brush manner. The principal exception to this approach is Plot XIII, which will be dealt with in greater detail as it serves as a useful exemplar. No case studies are included for this period.

**Plot X**

Plot X continued to function as a chemist and went through some modifications in 1934, when it ceased to be an independent business and became instead a subsidiary branch of another local chemist. The frontage of nineteenth-century Standing Building 18/19 (see Fig. 5.41B–C) was also modified in 1934. On the southern side of the ground floor is a rather grand six-panelled brick doorway, markedly different in colour to the upper floors, with a fanlight and ornate wrought iron grille above. Above this a large stone plaque is set into the brick (see Fig. 5.41F). The design shows a pestle and mortar with an owl, the symbol of the Roman goddess of medicine Minerva, sitting on one edge holding a scroll in one claw with the dates 1851 and 1934 to either side. The scroll beneath has a nearly illegible Latin motto which appears to read SCIENDO ET [C]ANDO. This translates as ‘knowledge and candle’ and is apparently based up the quote by Thomas Jefferson (1813): ‘He who receives an idea from me, receives instruction himself without lessening mine; as he who lights his taper at mine, receives light without darkening me’. This is often paraphrased as ‘Knowledge is like a candle; even as it lights a new candle, the strength of the original flame is not diminished’. In this inscription it has been shortened even further.

Since the 1860s these premises had been occupied by H. Church & Son chemists (above), but in 1933 Henry’s widow Ellen Rose Church died, providing the impetus for the family to give up the business.
It was taken over by G. Peck & Son Ltd., pharmaceutical chemists and opticians, a long-lived business established in 1851 and initially based at 30 Trumpington Street (Ellis 2002). This business continued until 1977 and the premises are still a pharmacy.

Behind Standing Building 20, small semi-sunken Building 47 was backfilled c. 1920–40, possibly as part of the 1934 modifications. The backfilling contained a small quantity of pottery, a spoon, a knife and a bone typewriter brush marked + REMINGTON + on the bristle face and USED FOR TYPE ONLY on the rear (Fig. 5.76). This brush was designed to be used to clean a Remington typewriter. Remington began manufacturing typewriters in 1873 and although the business was sold in 1886 to the Standard Typewriter Manufacturing Company, Inc. the brand name continued and in 1902 the company became the Remington Typewriter Company. In 1927 the company became Remington Rand, suggesting that the brush is earlier than this date.

Plot XIII
Plot XIII continued to be used as a grocers for much of the twentieth century, going through numerous marked changes affecting both the frontage and the yard. Although the grocery business continued, the premises was progressively downgraded to being a subsidiary branch of another local business and then part of a national chain. Partly as a result of this, as the century progressed the usage of the

Figure 5.75. All twentieth-century archaeological remains encountered at the Grand Arcade site.
plot became more fragmented and elements were let separately to other businesses. This meant that Emmanuel College gained additional rents from those occupying the upper floors of the frontage buildings and some of the rear of the premises; in addition, it gained money through sharing drainage facilities, the presence of a telegraph pole and some garages.

In 1900 the College refused permission for the premises over the shop to be used for business purposes, stating that they must remain domestic. This was apparently ignored and from c. 1901 onwards various businesses occupied part of the frontage. Standing Building 21 was rebuilt or ‘restored’ (Stokes 1915, 38) c. 1908–15, and probably in 1912–13 based upon changes in occupancy, in a version of the Queen Anne style (Fig. 5.77) with a basement and three floors, the uppermost being an attic in the roof-space. The rebuilding work relates to the fact that the building no longer provided a residence for the proprietors, as the grocers Flack & Judge who occupied the premises until 1947 lived elsewhere, so the upper floors were occupied and let separately. Prominently placed on the frontage is a stone sign that reads EMMANUEL/THE CHALICE, depicting the College coat of arms, of a lion rampant holding in his dexter paw a chaplet of laurel in chief a scroll sable, above a chalice. Plot XIII had been the Chalice Inn for around 60 years c. 1578–1637, but by the early twentieth century the plot had not been referred to by this name for over 250 years. This suggests that the sign is a self-consciously antiquarian statement, which may have inspired by the history of the Barnwell Gate suburb that was being researched by the Reverend H.P. Stokes (1915); one of the occupants of Plot XIII in this name for over 250 years. This suggests that the sign is a self-consciously antiquarian statement, which may have inspired by the history of the Barnwell Gate suburb that was being researched by the Reverend H.P. Stokes (1915); one of the occupants of Plot XIII in 1910–12 was the Reverend Fredrick George Walker, MA (c. 1858–1936), secretary to the Cambridge Antiquarian Society.

Walker was the curate of Godmanchester (1902–6) and Comberton (1906–13), who began digging at Godmanchester independently and then began to excavate and survey other sites for the Cambridge Antiquarian Society (Thompson 1990, 38–40). He became assistant secretary of the society (1907), secretary (1908) and then editor and was a prolific author who also increased membership of the society and started public lectures attended by audiences of several hundred. In 1913 he left to become organizing secretary of the Egypt Exploration Society, remaining an honorary member of the society. A post-medieval iron key with a cusped bow, piped stem and flat ‘S’-shaped web ‘found in yard, at the back of Flack & Judge, St Andrews Street’ was donated to the Cambridge Museum of Archaeology in 1907 by Walker. The interior of Standing Building 21 had been so heavily modified that it retained few traces which can be linked to its early twentieth-century occupants. One exception to this was a large deed or legal cupboard set into the fireplace of the rear room on the first floor (Fig. 5.77E). This presumably relates to the use of this room by either Algernon and Jasper Lyon of Lyon & Sons, solicitors from 1913 onwards, or by A. Leverington, registrar of births and deaths, from 1929 onwards.

In 1908 the National Telephone Company Ltd. obtained permission to erect a telegraph pole and necessary supports in the rear of the plot; the surviving bottom 0.84m of this 0.3m diameter telegraph pole was discovered during the excavation. An associated plan indicates that the largest of the buildings on the southern side of the plot tail had been demolished by this time, but the rest of the area was much as it had been in 1885. The telegraph pole rental provided a modest, but undoubtedly useful, additional income to the College.

Between 1908 and 1926 the rear part of the plot tail was completely reorganized; WC 1 and Well 53 were demolished, marking the full victory of mains water and sewerage systems. The lead pipe from Well 53 was removed, undoubtedly for its scrap metal value as it must have weighed c. 50kg, and the hole carefully backfilled. The buildings behind these features on the southern side of the plot were demolished and a large structure – Building 54, which measured 20m long by 3.8m wide – was constructed along the northern side, over what had previously been a garden. Included in the construction deposits of the building was a near-complete Bath Brick from Somerset, used for scouring or polishing. In 1915 a yard area and Building 54, which was described as a workshop, covering the rearmost 41.75 sq. m were leased separately to various businesses, particularly a coachbuilders.

In 1919 there were repairs to a ‘shed’ in the yard and between 1925 and 1929 warehouse Standing Building 70 was redecorated. In 1921 an agreement concerning the drains was renewed and the tenants of Plot XIV had to pay a quarterly charge to the College. In 1932 a report described the plot as in an ‘exceptionally favourable position … visible for some distance down Emmanuel Street … on the shady and best shopping side of St Andrew’s Street … with valuable adjunct of rear access for vehicles’. Standing Building 70 is described as a large brick and slated three-storey building 46ft (c. 14.0m) long by 17ft 9in (c. 5.4m) wide, with a chain hoist for goods and all floors used for stores; ‘the Warehouse is a really good building for storage purposes having a floor area on three storeys of nearly 2000 sq. ft [c. 186 sq. m]’.

In 1933 there were plans to erect up to five garages in the plot tail on an area of ‘old stores and an ash pit’, and Flack & Judge were asked to ensure that they kept the yard clear. There was no archaeological trace of the ash pit; this is however unsurprising as local byelaws indicate that such structures were raised rather than sunken. Six garages (Standing Building 78) with substantial concrete foundations were constructed. One of these was included in Flack & Judge’s lease, but between 1934 and 1962 the other five were let separately by the College to various local businesses. Associated with the construction of the garages, the shaft of Well 53 was relocated and a hole cut into it so that it could act as a sump for oil and other noxious liquids. These garages were a modest additional source of income for the College and mark the transition from horses to motor vehicles common c. 1920–40. Two single-storey lean-to stores buildings, Standing Building 80, were also constructed at the same time to the north.

The construction of Standing Buildings 78 and 80 necessitated major modifications to the warehouse Standing Building 70, as vehicles could no longer access the loading doors on its northern side. On the northern side of the building the western halves of the ground and first floor double-width loading doors were partly blocked and narrowed, creating standard-sized doors, and the ground floor and some of the second floor windows were bricked up. The second
Figure 5.77. Buildings in Plot XIII: (A) frontage of Plot XIII, (B) stone frontage sign that reads EMMANUEL/ THE CHALICE, as well as depicting the College coat of arms of a lion rampant holding in his dexter paw a chaplet of laurel in chief a scroll sable above a chalice; (C) early twentieth-century advert for Flack & Judge; (D) 1930s view of the rear entrance to plot and part of St Andrew’s Hill, with signs for Foister & Jagg and Flack & Judge at Plot XIII and Barrett & Son and No. 3/4 St Andrew’s Hill; (E) deed or legal cupboard set into the fireplace of the rear room on the first floor (images C–D courtesy of the Cambridgeshire Collection, Cambridge Central Library).
floor door was entirely bricked-up, apart from a four-pane shallow window. A new door was inserted in the position of one of the second floor windows and an external staircase added, providing the only means of access between the floors. On the eastern wall the ground and basement floor windows were bricked up.

On the western wall three double width centrally set loading doorways were inserted, replacing those on the northern wall (albeit in a less convenient location which meant that items would generally have to be moved further within Standing Building 70). Internally, on the ground floor the layout was altered slightly and the wall separating the eastern third was extended so that it met the north wall part way across one of the blocked ground floor windows. An axial support beam runs the length of the room, supported on two circular iron posts. As a brick pilaster has been built into the dividing wall to support the axial beam it is likely that the beam and iron pillars were also added at this time. This might indicate that the first floor required greater strength. The only associated documentation indicates that in 1933 an old and disused chimney was removed and in 1931–6 repairs to the roof were undertaken. This implies that the kitchen element of Standing Building 70 had gone out of use by this date.

In 1936 new iron gates over 6ft (c. 1.8m) high were installed at the rear of the plot, perhaps as a result of the construction of the garages. In 1947 the main business became a branch of a flourishing and expanding local grocery firm Matthew & Son Ltd. (Wilson 2010, 145–6). As the premises now became a branch store this represented a relative downgrading of what had previously been the main premises of a business, and was the opposite of the earlier situation as Flack & Judge had branch stores at 59 Hills Road and 15 Peas Hill. At this time the Flack & Judge premises consisted of the ground floor and basement of the frontage building, various outbuildings immediately behind the frontage building, the warehouse, two storage buildings to the north of the warehouse and a garage.

By 1964 a considerable amount of work was needed to the property and in 1965 the status of the business was again downgraded, becoming part of Bristol Vintners Ltd., a large national chain of wine and spirit merchants. This had an immediate impact, as the warehouse Standing Building 70 was sublet to the Robert Sayle department store, with vehicle and foot access from the rear and foot access from the front. This marks a major change and indicates that the wine and spirits merchants required much less storage space than the grocers. In 1977 the Robert Sayle department store also leased Standing Building 79, an elevated structure above the garages Standing Building 78 that extended over the access way to the south supported on brick columns at the southern end as a 'first floor store'; the lease included an iron staircase for access. This structure continued in use until 2004, ultimately as the Robert Sayle department store counting house, and was accessed primarily from within buildings in Plot X to the north.

Meanwhile the frontage building continued in its role as a wine and spirit merchant in various guises, eventually becoming student accommodation by Emmanuel College and c. 370 years of continuity as a chandlers/grocers/wine merchants came to an end. Although Standing Building 21 survives, incorporating the Emmanuel College/chalice sign, Plot XIII as an entity largely disappeared; although at the time of writing Standing Building 21 is occupied, not entirely inappropriately, by Chocolat Chocolat (see Fig. 1.10).

**Plot XIV**

Plot XIV was atypical as its garden, which had been extended several times in earlier centuries and had been the focus of much eighteenth-nineteenth-century activity, remained in use until the 1970s. By the 1960s this represented the last surviving garden in the street block, so its subsequent loss in some respects marked the end of the large open areas that had been such a dominant element of the area during the medieval and post-medieval periods.

At some point around 1924–40 some small buildings were erected on the northern side of the garden, possibly in 1937 when there appears to have been a reorganization of the plot and part of the garden area became a yard. The only footings associated with these structures were concrete slab Foundation 4 (MINI 166), which had a base made up primarily of broken pottery including two souvenirs of the British Empire Exhibition held at Wembley in 1924. There is no obvious source for this pottery, although it may relate to a general clearance of material that was stored in the garden area. Some trees and bushes were removed from the garden at around the same time and a copper alloy farthing minted 1895–1936 was found in the top of PH 3.

Standing Building 22 was gutted by fire in March 1969. It was subsequently rebuilt to a new plan behind a façade that is either the only survival or recreates the earlier frontage. In the 1960s the plot tail was still occupied by a garden area; a plan of 1965 indicates that the small pre-WWII buildings were still present while a 1968 aerial photograph shows that the garden was densely occupied with small trees or large bushes. Following the alteration to Tibb’s Row in the early 1970s the structures in the plot tail were demolished and the garden was destroyed. After this the area formed a long open yard, used predominantly for parking by the Robert Sayle department store.

**Plot XX**

Plot XX went through substantial building episodes in c. 1904–6 and c. 1973–5, which effectively removed the archaeological potential of one of the most significant plots in the street block.

In 1904 the Birdbolt was demolished and the offices of the Norwich Union Insurance Office (founded 1797) and Liberal Club designed by G.J. Skipper of Norwich were constructed with ‘deep foundations’, which were subject to limited archaeological observation and finds recovery (Hughes 1907a, 425); the offices opened in 1906 (Fig. 5.78A). Pevsner described the St Andrew’s Street element of this building with its ornamental white stone façade as ‘typically Edwardian, very Baroque’, while on Downing Street it was ‘rather more William and Mary’ (Pevsner 2001, 247). It has also been described as ‘gay and luscious in the richness of its Edwardian Baroque, a delightful success with its recessed arch, its garlands, and its putti [winged cherubic boys]’ (Little 1960, 131–2).

These buildings were demolished in 1973 (Fig. 5.78B), apparently with no archaeological intervention despite the proximity of the University Department of Archaeology, and replaced with and the generally unloved pre-cast concrete Norwich Union House designed by Feilden and Mawson and opened in 1975. The group of putti was retained rather incongruously on this structure (Fig. 5.78C–D) and then later again in the Grand Arcade development (Fig. 5.78E), appearing here even more lost and out of context.
Figure 5.78. The Norwich Union building: (A) the preceding building in c. 1970 with putti visible, facing northwest; (B) Downing Street, showing building work in progress on site of Norwich Union building c. 1973, facing northeast; (C–D) the putti on the 1970s building, facing west; (E) the putti in their current location, facing north; (F) the current St Tibb’s Row road sign (located lower left in E) (images A–B courtesy of the Cambridgeshire Collection, Cambridge Central Library).
Plot XX has played little part in the archaeological narrative of the Grand Arcade street block, despite possessing the richest documentary and cartographic records of any plot and having a uniquely favoured corner location. From the few fragments recovered in 1904, it appears that this plot may have been distinctive in the medieval period, and certainly from 1577 onwards as the Birdbolt Inn it appears to have been uniquely significant. Its loss from the archaeological record, particularly in the 1970s, is therefore all the more galling and it is important that the partiality of the archaeological story that survived until 2005—6 is not overlooked.

The Robert Sayle department store incorporating specialist information from Tony Baggs, Andrew Hall, Vicki Herring and Quita Mould

The Robert Sayle department store was first established in the 1840s and continued to develop throughout the mid-nineteenth to early twenty-first centuries. Given the scale, complexity and continuity of the department store’s developmental sequence it is dealt with here as a single entity, although the account has been subdivided into two portions—covering the nineteenth and twentieth centuries respectively—in order to aid comparison with the preceding sections. Because the department store also effectively created the context in which the archaeological investigations took place, an overview has already been presented in the introductory chapter of this volume (Chapter 1). Structurally, the following discussion has also been divided spatially into both ‘frontage’ and ‘rear’ areas, although this is a relatively arbitrary distinction. The remains relating to the department store principally consisted of standing buildings, although some below-ground features were also investigated (Fig. 5.79).

Nineteenth century

Robert Sayle (1816–83) was apprenticed at the Hitchcock, Williams & Co. drapery business in London in 1838, before setting up his own business in the southern part of Plot VIII, known as Victoria & Co. drapery business in London in 1838, before setting up his own business in the southern part of Plot VIII, known as Victoria House, which he leased from Emmanuel College in 1840 (Gooch 2004; Sieveking 2004). Sayle occupied the frontage and around 100ft (c. 30m) of the plot, consisting of a ground floor shop, upper storey living quarters, a basement warehouse/stockroom, a small yard and some outbuildings. The business sold linen drapery, silk mercery, hosiery, haberdashery and straw bonnets, in competition with other linen drapers and silk mercers in Cambridge plus a number of other closely related businesses. Drapers—who had always sold a variety of goods, held expensive stock requiring significant amounts of capital and dealt in textiles, which were being transformed by industrialization—were at the forefront of the development of department stores (Crossick & Jaumin 1999, 10) and the Robert Sayle department store was no exception. Department stores developed in the mid-nineteenth century and are a type of retail establishment that sold a wide range of products, without a single dominant line of merchandise, in a wide range of independent departments with their own staff and tills. They have become an important facet of modern consumerism and have been the subject of considerable academic study (Adurbaham 1964; Crossick & Jaumin 1999; Hogood 1999; Jeffreys 1954; Laermans 1993; Lancaster 1995; Miller 1981; Pasdermadian 1954) and there has been some architectural interest in them (Calladine 2001; Wessex Archaeology 2003, 54–8), although they have been relatively neglected by archaeologists.

Although there were other department stores in Cambridge—notably Eaden Lilley of Market Street (1750–1999; Ormes 2000), which also had a strong early nineteenth-century drapery element, and Laurie & McConnel of Fitzroy Street (1883–1977)–Robert Sayle, in the phrase coined by Emile Zola in his novel Au Bonheur des Dames (1883), was the town’s leading ‘cathedral of consumption’. In 1851 Sayle expanded into the northernmost part of Plot IX, part of the large holding owned by Jesus College. In that year there were 32 people living at the premises including Robert Sayle himself, his wife and daughter plus a clerk, 19 draper’s apprentices, two draper’s porters and five servants. Around 1860 Sayle leased the northern part of Plot VIII. This did not form part of the main business premises as the Sayle family occupied part of this and sublet the remainder. By 1861 as well as the Sayle family, there were nine servants, 24 draper’s assistants, five draper’s apprentices, two draper’s clerks, a mantle trimmer and a milliner. In 1865 Sayle took over the rest of Plot IX, plus Plot XII behind. The still largely open rear garden area of Plot XII covering c. 2100 sq. m (Fig. 5.79A) presented a rare and attractive opportunity for large scale expansion, based upon the contiguous landholding of Jesus College that had its origins in the medieval period.

In c. 1866–9 the Sayle family moved to Leighton House, Trumpington Road, (Fig. 6.20B) on the outskirts of Cambridge, and by November 1869 the rear of the garden next to Tibb’s Row had been built up with a warehouse plus workshop over to the north and a ‘strongly and substantially’ built stables and carriage house with appurtenances to the south. Also in 1869 Robert Sayle opened a London office and by 1874 the business had links to both Hong Kong and Shanghai. In 1871 the head of household at the business was William Henry Lee who was a draper’s clerk and manager. Also resident were his wife and two children. There were six servants, 55 drapers, a draper’s clerk, a draper’s assistant whose wife also resided at the premises and one lodger. In 1874 Sayle took over the northernmost part of Plot X and the adjacent portion followed by 1877. By 1881 the head of household was the housekeeper Louisa Nottage, there were six other servants and the staff consisted of a head draper, 15 drapers, 12 assistant drapers, seven commercial clerks, a commercial traveller, five dressmakers and 12 dressmaker’s assistants.

After Robert Sayle’s death in 1883 (see Fig. 6.20C) the business became Robert Sayle & Co. in 1884, with three owner-directors; Joseph Clark, Arthur Edward Chaplin and Hugh William Porter. At this time the business assets included goodwill (£5500), leases and buildings (£5000 related to Emmanuel College, £9500 related to Jesus College), merchandize (£27,252), furniture, fixtures and rolling stock (£3355) and six horses (£135) (Sieveking 2004, 38). By 1885 most of the area had been developed, leaving only passageways and a central yard as open spaces. In 1889 along the frontage from north to south there was a shop, a house and shop, a covered passageway and a wholesale shop and stores (Fig. 5.79C). Behind these were a warehouse, two houses, a reading room, a brew house, a coach house and a cottage. Fronting onto Tibb’s Row the pre-1869 stables and carriage house with appurtenances remained largely unchanged. The warehouse plus workshop over had been expanded, and was now occupied by the Cambridge Scientific Instrument Company. The space between the St Andrew’s Street and Tibb’s Row elements included carpet warehouses, a down room, a stable and a building for hay straw and harnesses arranged around a central yard, which contained the pre-1877 pump house.

At the end of the nineteenth century (Fig. 5.79D) the department store complex represented more than half a century of lease acquisition, investment and building on a major scale. Although it was dwarfed by department stores in other larger cities, such as Bon Marché (Paris), Walsh’s (Sheffield) and Selfridges (London), the Robert Sayle store was of a scale unparalleled regionally in East Cambridge.
Figure 5.79. Nineteenth-century plans of the Robert Sayle department store premises in: (A) 1862; (B) 1877; (C) 1889; (D) 1898 (all plans courtesy of the Master and Fellows of Jesus College Cambridge).
The overall arrangement was not, however, the inevitable conclusion of a coherent plan. There were leases acquired on properties that never became part of the department store, and failed attempts to acquire leases that were wanted. In addition, some of the structures built on the department store site were leased to others. By 1862, however, Robert Sayle had control of almost all the land that would encompass the business for the next 130 years, save some additions in the late twentieth century.

The series of detailed nineteenth-century plans allow the pattern of development to be understood. Robert Sayle began his building expansion in c. 1862–77, adding structures into the garden area between the frontage buildings and Tibb’s Row. Initially many of the pre-existing buildings were retained; however, following the initiation of the wholesale frontage rebuild around 1870, these were also gradually replaced so that by 1938 all that remained that predated Robert Sayle was a large eighteenth-century four-storey building (Standing Building 42/65; see above). The evidence for these buildings includes archaeological remains, standing building recording, lease plans etc. plus some early photographs. Amongst the eighteenth-century buildings still standing in late 2004 were the frontage range of Plot IX and the northern part of Plot X, eighteenth-century Standing Building 42/65, the 1870s–1890s extension behind Plot X, the ‘down room’ (Standing Building 48) and the Cambridge Scientific Instrument Building (Standing Building 56). There were also below-ground remains relating to Well 49 and Well 50/Building 43.

Frontage area

Originally three separate buildings, the frontage range of Plot IX was the only part of the store to have been significantly structurally altered in Robert Sayle’s lifetime. In c. 1876–80 the buildings were entirely rebuilt, to give a new front of four storeys with a basement (Figs. 1.15 and 5.82–5.83). Behind the mask of the classically influenced ornate stone façade, the underlying structure was technologically state of the art, as the wall-line of the upper floors was supported not only on large brick piers but also by a series of riveted vertical steel and iron girders; produced by the firm of Homan & Rodgers, the girders were cased in board to form pillars. The use of a riveted metal skeleton in commercial buildings in England was relatively rare, even into the latter years of the nineteenth century (Addis 1997, 106).

Homan & Rodgers produced ‘Homan’s fireproof floors’ and offered ‘constructional steel and ironwork, roofs, piers, bridges, joists and girders and concrete floors’, but ‘despite … many early, but modest uses of steel and concrete, the first large steel frame buildings were not built in Britain until the last few years of the century’ (Addis 1997, 106). In the Architects & Contractors Handbook and Illustrated Catalogue of Materials and Manufacturers of 1883 the Homan & Rodgers advertisement declared that ‘The use of rolled iron to a great extent superseded wrought-iron built girders for ordinary construction, on account of less cost and the numerous sections, which meet the requirements of length and load. A method of riveting one girder upon another was patented by Mr. Homan, whereby a great amount of additional strength is obtained, in the part of the girder usually the weakest’.

Within the building the ground and first floors were open and relatively light retail spaces, while the second–third floors were domestic accommodation for female members of staff. This was because although passenger lifts had been in use in America since the 1850s there were none at the department store, which meant that the ‘upper storeys were of little use for selling space, though they served well as a hostel’ (Sievenging 2004, 48). The original arrangement appears to have been two or four rooms either side of a large central stack, each with one or two windows, with simpler smaller rooms the other side of a central corridor. There are also stacks at each end. A moulded cornice runs round at ceiling level between the now blocked fireplaces, interrupted in places by later inserted stud walls. Some rooms have a picture rail; otherwise there are no internal decorative features beyond a simple skirting, an escutcheon or shield with the letters RS entwined within it (Fig. 5.82C). Although similar the two fronts are distinctly different in detail, with their separate identities remaining intact from the street view. It is clear that the creation of an impressive façade was important to the development of the department store in the late nineteenth century, and at four storeys the frontage was the tallest structure on the street block. Additionally, at around 60m long, rising to nearly 70m when Plot VIII was rebuilt in the early twentieth century, it was 10 times as long as most of the other frontage buildings.

In the last decade of the nineteenth century c. 1889–98, a further phase of extension and redevelopment took place apparently involving the whole range, apart from Plot VIII which was leased from a different College. At the same time Plot X was extended westwards, creating a large new retail area, the area behind Plot IX was also extended, increasing the sales area behind the main front. It seems probable that it was during these works that the internal decorative scheme within was established, including the installation of the two main staircases behind. Apart from the staircases themselves the scheme is best preserved at first floor level in Plot IX, and this is where it achieves full expression. The walls are decorated with large rectangular plaster panels and there are arches through to Plot X, the area to the west and to Plot VIII, although these must be twentieth-century copies, with keystone and plaster swags in spandrels. Above each keystone was a cherub head with wings to either side. Both the arches and windows have recessed-moulded architraves. The ceiling is plastered, with three main east–west beams and two lesser north–south beams between them. There is a cornice, consisting of a moulding above dentilition above egg-and-dart above a moulding, which continues around the edge and the main beams. Under each end of the east–west beams is a double corbel with acanthus motif, below which is a narrow moulded plaster panel. The panels are the front part of a casing around the steel pillars running to the floor below.

At the base of the wall a moulded skirting runs around the edge. The decoration in Plot X is slightly simpler, with a moulded cornice at the top of the wall and a large central medallion in the ceiling with six small ceiling roses with hooks. Moving through the arches into the area behind Plot IX the decorative scheme was again well-preserved. In the east wall were situated the other sides of the two arches through from the front. The arch form is the same, but the spandrels left and right of the keystones have a decoration of plaster wreaths. To the south was the head of the main staircase. Its upper balustrade has two groups of 13 balusters separated by blocks similar to the newel posts, although these have the margent motif on all four faces. At the head of the stair the balustrade sweeps down in the four and one pattern described earlier. Behind the stair the wall curves round 180°.

There is a moulded rail at the height of the upper baluster rail; above this are five large square panels with four smaller rectangular ones in between. The plaster moulding around the panels itself has a stylized floral motif. Above the stairwell is a large decorated glass dome with a chandelier suspended from its centre. The dome is divided into 12 segments by ribs, each segment with one of two alternating designs in leaded lights broadly reflecting, though not identical to, those on the staircase below. Below the dome the opening is decorated with an egg-and-dart border above an intricately moulded plaster frieze. The ceiling has two curving triangular panels and a dentilled cornice, which continues around the whole space.

The chandelier, although superficially ornate, is quite simple, consisting of six arms linked by strings of beads with central pendants. Below the centre is a small decorated bowl, at the top a series of
Figure 5.80. Photographs of the aftermath of Robert Sayle – ‘residues’ of the former store recorded almost inadvertently during building recording in 2005: mannequins abandoned in a structure to the rear of No. 18/19 St Andrew’s Street (upper) and chairs left scattered in the main staff canteen in Standing Building 42 (lower).
Figure 5.81. Photographs of chairs on the first floor of Standing Building 42 left more neatly than those of the canteen (upper) and the façade of the ‘re-branded’ John Lewis store prior to its re-opening in 2007 (lower).
Figure 5.82. The Robert Sayle department store frontage, which was constructed c. 1876–80 (Plot IX), c. 1877–89 (Plot X) and c. 1905–6 (Plot VIII): (A) general view of frontage, facing west; (B) double width mullion with two consoles at the top and a broad elaborate garland of flowers and fruit (Plot IX); (C) broad mullion or pilaster decorated with an ornate classically derived scheme (Plot X); (D) ornate blank cartouche over a window with fronds rising from its base (Plot IX); (E) escutcheon or shield with the letters RS intertwined (Plot X).
Figure 5.83. Early twentieth-century images of the Robert Sayle department store frontage: photograph of the frontage c. 1910, facing southwest (upper) and invoice head of c. 1925 (lower) (courtesy of the Cambridgeshire Collection, Cambridge Central Library).
hanging pendants linked again to the arms by strings of beads. The west wall continues the pattern of large square and smaller rectangular panels along its length, although here the lower half to two-thirds have subsequently been removed. In the north wall are two further arches and the square-headed opening which led to the ladies’ fitting rooms. The arches have moulded architraves and keystones as before but the spandrels are blank. At ground floor level only the moulded architraves and keystones are present. Photographs show that originally there were some more elaborate decorations, including plaster festoons of flowers and fruit below a large skylight.

**Rear area**

The two-storey structure *Standing Building 48* (Fig. 5.85), which was 21m long and 6.5m wide, was constructed c. 1877–85. Much of the building had a raised floor supported by dwarf walls to allow air to circulate and keep the building dry. This building functioned as the ‘Down Room’ and was used to process swansdown trimmings. *Standing Building 48* was built from a grey/white brick laid in Monk or Flying Flemish bond. Originally there were five segment-headed windows on the first floor, of which only two survived. The ground floor has been more significantly altered, but there had been at least one segment-headed window at the east end and presumably others long since removed. The western two-thirds of the building had series of dwarf walls constructed on a rough mortar surface that would have created a c. 0.7m-high air gap below the floor, which was presumably made of timber. There were gaps along the length of the dwarf walls and shafts along the main structural walls which would have meant that air could have circulated freely; although there is no evidence for any heating, this would nevertheless have kept the building dry. The 1889 plan identified *Standing Building 48* as a ‘Down Room’ (Fig. 5.79C) and it is likely that it was purpose-built for this function. By 1898 the western part of the ground floor was a coach house whilst the eastern part and the first floor remained a down room.

On the first floor there were three rooms used for the processing of swansdown trimmings. Swansdown trimming, from a range of species including ducks, geese and sheep, was used as an adornment to dresses and lingerie. It appears that birds, particularly geese, were periodically live-plucked of their breast feathers. The down was then washed and brought in from surrounding districts to the department store on Saturday mornings. Some collectors, known as ‘downers’, were then given down-proofed cambric, a lightweight cotton cloth used as fabric for lace and needlework, to take home and make into trimmings. This was a substantial business, involving four or five miles of cambric a month and some strips were sold to wholesale houses located as far afield as London and even China. The main feature of these rooms were a series of large metal lined bins with 16 lids along the walls that were 48ft (c. 14.6m) long, 2ft8in (c. 0.8m) wide and 2ft9in (c. 0.85m) high, holding c. 10.0 cubic m (Poole 1978; Sieveking 2004, 43–4). The Down Room in some respects represents the

**Figure 5.84. Snapshots of Robert Sayle: Plot IX glass dome with a chandelier suspended from its centre (upper); first floor Plot VIII in 1933 (middle); Plot IX central staircase (lower) (middle image courtesy of the John Lewis Partnership Archive Collection)**
From suburb to shopping centre: seventeenth to twenty-first century

Figure 5.85. Standing Building 48, the ‘Down Room’, which was constructed c. 1877–85: (A) the northwest elevation of the building; (B) cross-section of the building; (C) photograph of the dwarf walls at the eastern end of building, facing northeast; (D) photograph of the dwarf walls at the eastern end of building, facing east; (E) detail photograph of a gap in the main wall, facing south; (F) detail photograph of a gap in a dwarf wall, facing north.

Industrialization of earlier practices, as the fact that most geese were killed when fully mature during the medieval and post-medieval periods suggests that their feathers were an important consideration.

Just to the west of Standing Building 48 was situated Building 44. Constructed c. 1877–85, this building measured over 8.5m by 7.5m in extent and contained a series of internal walls; by 1889 it was used as a stables. Running around Building 42 was Drain 7, constructed from both salt-glazed cylindrical drains with cupped mouths and older style facetted ‘horseshoe’-shaped drains produced on or near the Isle of Ely (see Fig. 5.98). Abutting the eastern side of Building 44 and constructed at the same time was small rectangular two-roomed Cellar 13, which measured 6.5m by 2.2m in extent (Fig. 5.86).
Figure 5.86. Cellar 13, which was constructed c. 1877–85: (A) section of the cellar; (B) photograph of the cellar after excavation, facing south; (C) photograph of the cellar during excavation, facing south; (D) photograph of the cellar during excavation, facing north.
The original function of Cellar 13 is not described on any of the nineteenth-century plans, but by 1938 it had changed form and become a petrol tank. The initial phase of Cellar 13 consisted of a main cellar 4.65m long by 1.9m wide and a shallower half-height cellar area to the north 1.4m long by 1.9m wide. Bricks in a variety of fabrics were used to construct this cellar; some were local Cambridge products while others came from Burwell and the Isle of Ely. One had a stamped mark of EASTWOODS/FLETTONS, a firm based at Kempston Hardwick in Bedfordshire.

A complex of structures in the northwestern part of the area originally consisted of a warehouse plus workshop over constructed by 1869, which were entirely demolished in the 1970s. In c. 1877–85 the buildings were extended eastwards and part of this extension, Standing Building 56, did survive, although the western parts were demolished in the 1970s. In 1889 the extended warehouse plus workshop over, a series of smaller buildings and a carriage house were all arranged around a central yard. Surviving elements included a range of footings, the north wall and the roof. The north wall stood

Figure 5.87. Circular timber-lined shaft Well 49, constructed c. 1862–70: (A) the top of the shaft, facing west; (B) the upper part of the shaft, facing east; (C) section of the shaft; (D) reconstruction of the cross-section of the baulks from which the boards were sawn (based upon an original drawing by Richard Darrah); (E) simple U-shaped iron staple, possibly from the shaft lining ([37017]).
Figure 5.88. The ‘pump house’ Building 43 and brick-lined shaft Well 50, which were constructed c. 1862–77: (A) photograph of the top of pump house and shaft showing bridge rails and later drains, facing east; (B) early 1960s photograph of the ‘pump house’ showing the surrounding buildings and yard area, facing east (photograph B courtesy of the John Lewis Partnership Archive Collection).
Figure 5.89. Section of ‘pump house’ Building 43 and brick-lined shaft Well 50, constructed c. 1862–77.
to two floors, although only the upper part was visible externally. Construction was of grey/white brick laid in English bond. The first floor had five windows, three closely spaced at the west end and two more widely spaced at the east end. Although unprepossessing in its final form, *Standing Building 56* had an illustrious history. This was an early home of the Cambridge Scientific Instrument Company (CSIC), which was central to the late nineteenth-century development of science at the University (Unwin 2001), and it is likely that the additional structures of c. 1877–85 including *Standing Building 56* were purpose-built for the CSIC.

The company moved to St Tibb’s Row in March 1882 and left for Carlyle Road in 1895. These premises consisted of a two-storey building rented from Robert Sayle for £115 per annum and the reason for the move was that ‘the place formerly occupied was found to be too small for the work’ (Cattermole & Wolfe 1987, 34–6). The premises were extended again in 1882 and 1883 and by 1895 the CSIC was utilizing the ground floor consisting of the front office or store room, a range of offices extending back from it and a show room and private offices at the end plus the yard to the west of the fence. The rest of the block of buildings was occupied by the Cambridge Engraving Company, who used the upper floor consisting of five rooms, yard and sheds on the east side of the recently erected fence and gateway (Cattermole & Wolfe 1987, 42). By this time the still expanding CSIC needed larger premises and moved on again (Cattermole & Wolfe 1987, 49), so their tenure here lasted only 13 years.

Although much of the area was built over in the late nineteenth century, a relatively substantial central yard remained. Located within this area was the circular shaft of *Well 49* (Fig. 5.87), which measured 2.0–2.3m in diameter and 6.65m deep. This well had an unusual timber- and brick-lining consisting of three sets of 6ft (c. 1.8m) high vertical boards. The boards were largely Scandinavian Scots pine, definitely felled after 1820 and probably after c. 1855–70, plus some reused tongue and groove silver fir Georgian floorboards. The vertical boards were connected by pairs of horizontal wooden annular rings, made from a mixture of reused boards. Placed on the horizontal annular rings were two courses of unmortared brickwork, whose principal role appears to have been to provide weight to counteract buoyancy.

The individual sets of the vertical wooden structure were built on the surface and lowered into the shaft; the boards would have expanded when wet, causing most joints to become watertight. This structure is not one that would have been designed by an experienced woodworker or builder and it seems likely that it was devised by whoever was in charge of the plot. The structure probably failed relatively rapidly, with a likely lifespan of no more than 20 years and perhaps considerably less. The scale of *Well 50*, combined with the fact that it incorporated timber probably felled after c. 1855 and is not shown on a plan of 1862 (Fig. 5.79A), suggests that it was constructed under the aegis of Robert Sayle, but had been abandoned and backfilled prior to 1877 (Fig. 5.79B). The shaft would have naturally filled with water to a depth of c. 2.7m and would have held c. 9.8 cubic m of liquid.

A later development in the central yard was small, low circular brick-built *Building 43* (Figs. 5.88–5.89). Measuring 4.8m in diameter with a pitched tile roof (Fig. 5.88B), this structure was constructed c. 1862–77 (Fig. 5.79A–B) and probably in 1868 or later. By 1889 it was known as the ‘pump house’. The building contained circular brick-lined *Well 50*, whose shaft was positioned off-centre on the eastern side of the *Building 43*. The 2.3m-diameter shaft could not be fully excavated but clearly contained artesian water deriving from the Lower Greensand, which is located at a depth of c. 45–65/70m. Laid over the top of the shaft were two iron bridge rails (Fig. 5.88A), as used in broad gauge railway construction and presumably derived from dismantling of part of the Great Western Railway, suggesting that they were installed in 1868 or later.

The upper part of the shaft had a double thickness lining of bricks and an outer lining of upright planks. The bricks rested upon an annular ring of reused Scots pine Georgian floorboards, below which the lining of the shaft was only one brick thick and there were two heavy 0.2m-square oak bearers with protruding large iron bolts. Within the shaft the bearers were carefully squared; however, they also projected c. 2.0m to one side of the shaft and were just crudely trimmed trunks from woodland trees that were over 70 years old. It is probable that a steam engine sat on the iron bridge rails, while a suction pump was located on the oak bearers. The construction of the shaft was clearly a considerable and dangerous undertaking but by tapping into the artesian water supply so effectively, water could be obtained on an industrial scale. In many respects it is tempting to see *Well 50* as a much more expensive, well-built and successful successor to the less competently designed *Well 49*.

**Twentieth century**

In 1903 the department store premises were described as being ‘situated … in the centre of the best trade and business part of the town, having an extensive frontage on St Andrew’s Street [86 ft.] and covering 4100 sq. yd [c. 3400 sq. m]’, although some of the premises were ‘old fashioned and inconvenient’. By 1913 the business had recently spent nearly £13,000 on the ‘new portion’ and ‘old buildings’. The site was valued at £18,088 and the buildings at £14,312. In 1919 the business became Robert Sayle & Co. Ltd. and in 1934 it was sold to Selfridges Provincial Stores (SPS); in 1940 it was sold once more to the John Lewis partnership. During the later part of the twentieth century the department store acquired or leased several ‘satellite’ plots and buildings, although in general this only involved minor modifications to existing buildings.

**Frontage area**

The bulk of the frontage had been rebuilt in the late nineteenth century, but Plot VIII was not rebuilt until c. 1905–6 (Fig. 5.82; see also Fig. 1.15). This was allegedly because Robert Sayle vowed never to alter the premises where he first opened a shop (Sieveking 2004, 25), an oddly sentimental decision in such a keen-minded businessman. As Plot VIII was leased from Emmanuel College rather than Jesus College, it seems likely that the later development relates to this disparity. The new structure was four storeys high plus basement, much like the existing frontage in Plots IX and X. The frontage of Plot VIII is, however, quite unlike the classically inspired stone clad frontages of the rest of the department store. The façade is constructed from yellow/white hand-made bricks laid in English bond with heavy stone ‘long and short’ quoins at each end of the façade. There is a single broad stone course towards the top, immediately beneath the brick parapet in front of the third floor dormer windows. The windows in the main face have arched heads at first floor level, with moulded acanthus decoration and other moulded decoration appears on the front. Inside the decorative scheme already established in the rest of the frontage buildings in the late nineteenth century was continued in the same style, although the realization was rather simpler. This was most obvious in the moulded architrave on the arches. The expression of the scheme was, however, generally smaller and simpler as the cornices are not as deep and there are no panels or mouldings on the walls.

In the westwards extension behind the front range, the underlying construction of the building was obvious in iron series of beams, aligned east–west and north–south, which divided the ceiling into square bays. On these beams was a curious nod to classicism, not seen anywhere else. Around the bays was plasterwork with a Greek key pattern motif which, compared to some of the plasterwork elsewhere, was rather crudely executed. This was continued right through to the back of the complex, even including the 1970s extension. The stair from ground to first floor was also strikingly different, being made with an ornate cast iron balustrade rather
than the dark wood employed elsewhere. The upper two floors are above the frontage wing only; the second floor was accessible only from a corridor in Plot VIX to the south and a third floor via a staircase from the second floor. Both were divided into small rooms, with little evidence of original features. Plot VIII was linked to the other frontage buildings at ground floor level, although it was not fully opened out until 1934–5. At a broad level the ubiquity of the decorative scheme across the entire front of the department store indicates a coherence of corporate vision, with the business being conceived of as one store rather than a series of shops joined together. Within this schema, however, Plot VIII retained a degree of individual identity due to a combination of the absence of Robert Sayle, the changing tastes of the Edwardian period and its different ownership by Emmanuel College. The ground and first floor were open shop floor areas, with the less accessible floors above used as a hostel and for other ancillary purposes.

Although visually the department store was primarily defined by its façade, its large-scale institutional nature was also apparent below ground. By the early twentieth century the entire frontage was cellared, but these were relatively small spaces of similar scale to the basements of other properties in the street block. After WWII the basements were reorganized, as they were ‘desperately crowded, with a rabbit-warren of small cell-like niches in all directions off the two main rooms’ (Sieveking 2004, 101). In 1971 they were extended and in 1973–4 the basement was expanded westwards in some areas under standing buildings by ‘burrowing’, which removed 3000 sq. ft (c. 280 sq. m) of ‘mainly earth’ which was sent up a conveyor belt and wheelbarrowed away (Gooch 2004, 145, 149). The basement was still rather irregular in form, but in 1985 it was decided that it could not be extended further (Gooch 2004, 154). This basement appears to have been built from largely reclaimed brick, including thousands manufactured by the Sturbridge Brick Company, based at Cheddars Lane c. 1896–1931 (Porter 1973). These basements removed almost all earlier archaeological deposits, leaving only the bases of wattle Wells 4–5 (Chapter 4; see Fig. 4.6C–D); the 1973 expansion can thus be seen as representing a hidden archaeological disaster that complemented contemporary events occurring at the Lion Yard and Norwich Union.

Rear area

Although the functions of many of individual buildings changed over time, the overall layout of the rear area survived relatively intact, although there was a significant phase of works in 1934–8 after the store was taken over by Selfridges Provincial Stores (SPS) (Sieveking 2004, 78). One of the few plans of the whole store to survive in the John Lewis archive shows these changes, and the store itself, in a fair degree of detail (see Fig. 1.15). The Selfridges’ extension removed most of the few remaining pre-Robert Sayle structures, leaving only Standing Building 42/65. This included the buildings labelled ‘store’, ‘cottage’, ‘workshop’, ‘coals’ and ‘brow house’ on the 1898 plan (Fig. 5.79D). The extension created two levels of shop floor connecting back to the eastern end of Standing Building 48. The extent of these works clearly impacted detrimentally on neighbouring properties, as in 1938 the nearby occupants objected to the Sayles’ ‘extensive building operations’ (Sieveking 2004, 119). Further building work occurred in 1953–4, but the next major phase of reworking came in the 1970s. When the Lion Yard redevelopment shifted Tibb’s Row to its new position, the department store lost 20 per cent of the ground it occupied. This occasioned a large-scale expansion of building, so that by 1972–3 most of the open space and surviving nineteenth-century ancillary buildings had been replaced or subsumed (Gooch 2004, 146–7).

A minor, but archaeologically informative, change occurred when small rectangular two-roomed Cellar 13 was partially backfilled and remodelled in c. 1913–21 (Figs. 5.86 and 5.90–5.92; Tables 5.8–5.9; see further Cessford 2012). The material from the backfill can be broadly grouped into three types:

1) Material relating directly to the business activities of the department store, such as fixtures and fittings, equipment and stock.
2) Material relating to the care and feeding of the staff who worked at the department store.
3) Personal possessions, belonging principally to department store staff who lived in the hostel at the premises.

Attempting to determine what material derives from which source is problematic, and is not possible in many instances. Nevertheless there are some items that can be identified with a greater or lesser degree of certainty. The only clearly business-related items are five plastic drawer fittings labelled R. SAYLE & Co. (Fig. 5.90I). Although the business had sold china and earthenware since 1864, the majority of the ceramics do not represent shop stock, especially as much of it shows signs of use such as cut marks. After the drawer labels, the most likely materials to be business-related are a number of glass bottles relating to the Wellcome Chemical Works and the Whitaker & Co. Colour Works.

The department store workforce had their meals cooked for them, with separate dining rooms for men and women and another for directores/principals plus senior and junior sitting rooms. There is a considerable body of material that appears to relate to these dining activities. The plain ‘semi-porcelain whiteware’ (Fig. 5.90A–B) (MNI 43 plates and one meat/ serving dish) shows signs of use and is the classic type of ceramic to be provided in such a ‘corporate household’ (Beaudry 1999, 121–2). Of rather higher quality were the ROMA pattern vessels (Fig. 5.91A–B) (MNI one meat dish, six plates and one side plate). As this material has also been used it seems likely that this relates to the directors/principals’ dining room and the much cruder ‘semi-porcelain whiteware’ relates to the dining rooms for the more junior staff. ‘A carver was engaged to come in every day to distribute the meat ration’ (Sieveking 2004, 48–9) and it is tempting to imagine that this individual carved meat for the directors/principals using the 18in ROMA meat dish. There were also heavy tumblers (MNI 47) that in all probability relate to the dining rooms. The large food preparation vessels, particularly yellowware, also presumably derive from the kitchen. Tea drinking from a service with a design incorporating gilt bands and a tea leaf (Fig. 5.91C) (MNI 19, 15 cups and four saucers) also presumably relates to large-scale activities.

As well as the communal dining ‘there were cupboards in which they [individuals living in the hostel] might keep any extras they cared to provide for themselves’ (Sieveking 2004, 49). After the Sayle family moved to Leighton House on Trumpington Road c. 1866–9 (Sieveking 2004, 26) the effective but unofficial ‘head of household’ outside business hours appears to have been a housekeeper who looked after the hostel, and there would appear to have generally been around 70 individuals who lived in. Servants included the housekeeper who ran the hostel and several maids, who rose in number to eight or nine by the 1930s (Sieveking 2004, 79), plus a cook, a kitchen maid and a boy to carry coals, while workers consisted of a head shopman draper, who was also in some sense the head of household, plus numerous shopman drapers, draper’s assistants, dressmakers, dressmaker’s assistants, commercial clerks and occasional commercial travellers. Only a minority of the staff, typically less than 10 per cent, were born in Cambridge or Cambridgeshire, and even these individuals were often domestic servants rather than members of staff of the business. There were typically substantial numbers from London and Norfolk, the latter partly a reflection of Sayles’ Norfolk origins. The rest were widely scattered, with no particular local concentrations, and in 1881 included individuals from 22 English counties plus Ireland. The business was male-dominated to begin with, women becoming more common later on (Sieveking 2004, 24); by the late nineteenth century over half the hostel population were female and during WWI and the 1920s this trend continued (Sieveking 2004, 59, 61) with women
Figure 5.90. Miscellaneous material recovered from the backfilling of a smaller part of Cellar 13 in c. 1913–21 ([40274]): (A) Booth’s royal semi-porcelain plate; (B) Myott & Son imperial ‘semi-porcelain whiteware’ plate; (C) whiteware alphabet plate with moulded letters on the rim and a blue transfer-printed scene in the centre of a groups of dolls surrounded by the symbols of the manual sign language alphabet, manufactured by H. Aynsley and Co. of Longton; (D) poor quality green glazed small flowerpot or vase with floral pattern and a powdery white fabric; (E) poor quality green glazed small flowerpot or vase with Trellis pattern name and a powdery white fabric; (F) two egg cups with the black transfer-printed badge of Queens’ College, a green stripe around the rim and a black transfer-printed retailer’s mark of Barrett & Son Ltd. of Cambridge on the base; (G) Sunderland-type earthenware flared bowl with clubbed rim and internal brown glaze; (H) oval-shaped plastic fittings, probably for drawers, of R. Sayle & Co. of Cambridge; (I) spirits bottle of Morley’s of Cambridge.
Figure 5.91. Ceramics recovered from the backfilling of a larger part of Cellar 13 in c. 1913–21: (A) whiteware meat dish with black transfer-printed geometric decoration and pattern/maker’s mark “ROMA”/SPODE/COPELAND/ENGLAND ([40306]); (B) a whiteware Roma pattern plate ([40300], [40305]); (C) gilt tea leaf pattern in the base of a bone china tea cup ([40305]); (D) Utilitarian English stoneware THE/D.B.C./[FO]OT WARMER ([40305]); (E) whiteware vessel with black transfer-printed mark L & C HARDTMUTH/VIENNA ([40300]); (F) circular biscuit ware item with three feet shaped like a gas mantle, but showing no signs of being heat-affected ([40305]).
Figure 5.92. Glass recovered from the backfilling of a larger part of Cellar 13 in c. 1913–21: (A) generic complete Codd bottle based upon several recovered; (B) Niagara patent Codd bottle with double recess with top broken of G. Gilbert of Cambridge, manufactured in London (140305); (C) Codd bottle with top broken of A M Pleasance & Son of Cambridge (140305); (D) complete Codd bottle of Potts brothers of Cambridge, manufactured in Leeds (140300); (E) complete Codd bottle of Woods & Son of Cambridge, manufactured in Barnsley (140306); (F) Codd bottle with top broken of the Sawston aerated waters company, manufactured in Barnsley (140300); (G) Codd bottle with top broken of the Droxford mineral water works of Burwell, manufactured in London (140306); (H) beer bottle of the Star Brewery of Cambridge (140300); (I) beer bottle of Lincolne & son of Cambridge, manufactured in LONDON (140305); (J) lime juice bottle of Lauchlin Rose and Co. manufactured in St Helens (140305).
Living above the shop and other stories

In March 2007 an extensive display was arranged of finds from the site, information about current thinking in post-excavation and video shot during the excavation process (Fig. 5.93C). In addition to this a short film was produced, in conjunction with the Robert Sayle department store, highlighting the experiences of some of those that had worked and lived in the store in the 1940s–60s. Interviews were conducted with six retired partners (to use the John Lewis terminology) with a total of 245 years’ service between them by Alison Dickens (19 February–11 March 2007). Two had lived in the hostel in the

Figure 5.93. Public engagement at Grand Arcade: (A) site tour during open day in 2005, facing south; (B) John Alexander being given site tour of the King’s Ditch by Alison Dickens in 2005, facing northeast; (C) display at St Columba’s Church, Cambridge, part of Cambridge University Science Week in March 2007; (D) finds on display in the Cambridge gallery of the Museum of Archaeology & Anthropology, Cambridge, which opened in 2012.
In the attic there was washing lines and you did your ironing in the attic, but originally I think they had their food in the dining room. When I first moved in I was in a tiny room, but then somebody moved out and I got that room where I stayed for the rest of the time, at the back. The last man had just moved out when I moved in and I got that room where I stayed for the rest of 2006, hostel dweller 1960–4)

Coral Gould (employee 1945–90, hostel dweller 1947–51)

I said to my mother I’d like to work there, where there’s always people, I love people, so we went up and inquired, spoke to the registrar, and I was offered a job. I didn’t go in at first, I travelled every day from Soham, it was in the blackout during the war, it was very frightening.

Mr Walsh who was then the Managing Director, very stern but nice man, I liked Mr Walsh. He wouldn’t let me live in at that time. I was too young for being in Cambridge and with the type of ..., that’s what he said actually, the type of girl that was actually in the hostel at that time, he didn’t want me in there, just like a real old dad he was to me. But I went in soon after that, so I must have been 15 or 16.

I had a big room, they were at one time going to be two little rooms and then changed it to have a big room for some reason, I don’t know what that was.

When we were courting I was living in, and when visitors had to leave at night the watchman used to ring that bell like mad so he [her fiancé] had to run all down those stairs to get out before the gate got locked.

When you woke up and you were working, you went down for your breakfast, which spoiled you, it was there and you helped yourself. I missed that terribly when I got married.

To me it [the hostel] seemed always full, you had a job to get in. You see a lot of people wouldn’t have put up with it because you had to have the night watchman on that kept a check on you. So for those that wanted to be more flighty that wouldn’t have suited terribly.

[After work] I would then start getting ready to go out. I mean ‘cos we’d go down again into the canteen for supper, what they called supper, I suppose it was a high tea you know, and then go up and shower or have a bath or whatever and get ready for going out. So I mean it was a damn lazy life, wasn’t it?

It was never home. I loved my room to be homely, I liked the comforts that I gradually got into it for myself, but no, it was a place of work and where I stayed at night, but it was never home. I loved it all, don’t get me wrong, but it was never other than my place of work that housed me for the night. But it was a happy place, lovely to bash on somebody’s door and say hello at any time.


When I first moved in I was in a tiny room, but then somebody moved out and I got that room where I stayed for the rest of the time, at the back. The last man had just moved out when I went there.

When I was there you had loo, a bathroom [along the corridor], a kitchen at the end and then stairs going up to the attic, but originally I think they had their food in the dining room. In the attic there was washing lines and you did your ironing in there as well, if you had the windows open you got a good dry. You mustn’t do it where the customers could see, oh dear me no!

The gate was locked at 12 but you weren’t allowed to have anyone in your room after ten. It was very eerie, you know, if you came in late, because if you imagine you’re walking up that yard, got all these vans parked up there and you’re walking across to that iron staircase and that well in the middle, you couldn’t see round that little house! You’d go in, and there was a night watchman down stairs, he would occupy a rest area I think, that got taken over as all kitchen eventually, but the bottom of the stairs part of the kitchen area was where he used to sit and he was the one that was responsible for going all round the shop and checking everything was locked up and everything and locking the gate at a certain time and you would hear him coming up and down all the corridors, he’d have to shut the fire doors. Also a lot of people didn’t realize that was a hostel up there and on one occasion we had a policeman came up because he saw somebody going up there and he came up because the gate was obviously open because it was during the day and the vans were coming and going, to see what was going on and he was quite surprised to find people up there!

Because of the iron staircase and the fact he [the night watchman] was sitting there below he always knew who was coming and going, there was only women there and he could tell the difference between a man and a woman, I mean, he was, yes, he was on the ball he would call out, he knew all your names, ‘Is that you so-and-so’, and you’d have to answer because it was like a well wasn’t it, so you just had to put your head over [the banister] and say ‘yes it’s me’ sort of thing, if he called out, or he would recognize your footsteps, so you wouldn’t really get away with it. There was an older lady used to live down the corridor, a section manager, and she had what we called ‘eagle ears’ and there was creaky floorboards and I bet if you were coming in late ‘is that you!’ you get the drift, you know.

And the door that was there into the shop was locked. If you went down to the basement you still couldn’t get up into the shop not that part ‘cos that was the kitchen area you know so obviously you couldn’t get into the shop at any point at all so it was completely closed off to you, you know, even all the corridors that later on led through to the shop those as well were all locked at that time so it was just that well of stairs and that was it and the one down onto the roof so you could tell how to get out if necessary.

But it was quite good, you know, on a Sunday you’d cook your lunch and that was when if we were in we’d sort of sit at the table in the kitchen together and eat it if there was a few of us in and they used to have Round the Horn they would have that going, we’d put the radio on the table and listen to that while we ate our lunch.

In those days the shop was much further down, I’m talking about before they started knocking it about you know. They did eventually move some offices to the floor below and eventually they moved staff training up on that floor but that was down at the end opposite the kitchen and that didn’t really affect us because when that was going on we weren’t there. I can remember one year we got permission to have a Christmas in there, one of the ladies cooked us all dinner, that was quite good.

There was lots of rules and regulations as you would expect, you had to buy your milk in the dining room, she always used to have all your milk there, they didn’t like it if you weren’t buying your milk and looking after yourself you know what I mean and they would come and leave clean linen in your room each week, because they stopped you so much rent you see and that was what was included, bed linen, and you only had to put money in the meter in your bedroom for the fire you didn’t have to put anything in the slot for the cooking so that was obviously to cover that you see, and so that just used to come out of your wages before you got them, so they looked a bit depleted. And obviously during the day you could eat in the dining room and you just needed to cook mainly at weekends upstairs. You had
a cupboard with so many shelves in each and things like that. So quite interesting, quite amusing. And they used to come round and have a nose to make sure you were keeping your room clean and tidy, you know, and the cleaner used to clean the bathrooms and the kitchen and the communal areas, but you had to do your own bedrooms.

Other employees: joint interview with Pam Woollard (PW; employee for 45 years), Joyce Badcock (JB; employee for 33 years), Cynthia Ye (CY; employee for 41 years) and Margaret Caldecott (MC; employee for 43 years).

(PW) 1938, I was in there shopping for my birthday present, which was an armchair with dark mahogany coloured arms and a blue and brown print covering which went up in tiny squares like a stained glass window, and I had it delivered by Robert Sayles. So I must have been coming up for four then you see. Father Christmas we had upstairs, about the same time, I think it was 1938, and I remember going on the moon rocket. I put all this down when I did my 25 years. One of the top managing directors in those days, he was the one who installed it so he was thrilled to bits to think someone could actually remember it!

(PW) I went in there with my Grandmother, she always shopped in there, and a young uncle of mine started to work [in the funeral department], course the war came along and he left, he wouldn’t have gone back to that after the war anyway. The funeral parlour was in the back yard, and in latter years it moved further out to the back yard, and display department, where I worked, had it as a model room. It wasn’t very nice going in there, really, there was urns still in there left behind, and we always used to rattle the door to make sure no-one was moving in there before we went in to collect the models, it was quite a laugh really, horrible! (MC) We went in and out and there didn’t we, you know, if you needed anything, (PW) And there was empty coffins standing everywhere, that had been used I think! (MC) Len had his workshop and Cyril made the coffins (PW) and the French polishing, all that, they all worked there didn’t they.

(PW) We used to work in there when the shop was closed, in display, and when all the lights went we had to go right over the big lovely staircase into the other part you know where our store was, and they used to cover the models in like parachute silk and when you went past them if you made a lot of movement they’d slip off! It was pitch black, and, you know, you ran out the other end as quick as you could. (JB) I do know my mother said that when they worked there they used to have to go down to the basement at night to get the covers to cover everything up and they used to make a lot of noise going down the stairs because you could hear the mice and that running. In our time we used to cover everything up at night with these old parachutes. (PW) I was a junior you see and got sent all over the staircases to pick up whatever they wanted, and I was really scared tell the truth, I wouldn’t have said so at the time.

(PW) And the windows they were real old fashioned and when you walked around they were very high off the ground.

most of them. They were as old as the shop frontage I should think. We had lovely windows in those days, didn’t we, May Balls and things like that, really went to town, and there was a gap over the top where we used to have plants (JB) and in between people used to park their prams, between the two levels of windows (PW) and leave them for us, me and Coral, to look after them, they’d say ‘can we leave them here today?’ (CY) Customers were able to park outside the shop, weren’t they, on more than one occasion we’d take things out to the customer’s car and put it in their boot or whatever.

(PW) And it was so beautiful the building in parts inside, (JB) oh yes, and the staircase, (PW) and a beautiful sitting room upstairs, a lovely fire, easy chairs and a piano up there. And some of the fixtures in the department, I don’t know what you’d call it, mirror glass, and we used to put all the little flowers, it was so beautiful, but I don’t know what happened to some of these things, bits and pieces, we all remember differently. (JB) ‘Cos they built all that bit on the back didn’t they, (PW) bits kept being added on didn’t they (JB) the yard got smaller and the buildings got bigger.

(PW) there was that passageway right through the two halves of the shop wasn’t there, where the doors joined together, the main shop, where the furniture side of the shop was in latter years (JB) between the windows, it used to be our staff entrance (PW) so that went right from front to back (MC) that’s where I used to leave my bicycle, there were bicycle racks there, if we went to the pictures in the evening that’s where we used leave our bikes. (PW) They said they had a ghost used to ride through there on a bicycle, I never saw a ghost, I used to work there alone quite a lot and I never saw a ghost.

(PW) You didn’t live in did you? (JB) my mother wouldn’t let me, I don’t know what she thought I was going to do! (MC) But those little rooms used to fascinate me. I had a friend, well she was a junior on our counter at that time, and she had a dear little room up there and I almost thought, I’d really love to have one, I mean I lived in Cambridge, my mother would have had a fit if I’d said I wanted to go and live in the hostel. (PW) There was miles of stuff up there, all different levels (JB) yes, you got to the top of the stairs and you branched one way for the ladies rooms and the other way for the mens (PW) Yes, ‘cos they weren’t allowed to mix were they.

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(BJ) You would almost know the day of the week by the people that came in, it was a regular thing, every Tuesday it would be the same people (PW) you don’t have the characters now, do you, they rather expected us to know who they were.

(BJ) Well people didn’t leave, I mean, they just used to stay on. (PW) If you like to work in a shop with people, that was the best one to be in, unless you moved to London or somewhere, wasn’t it, really, I mean there wasn’t anything to touch it really, was there. (MC) My mother obviously used to go there shopping, so I only ever, don’t know about you, wanted to work at Robert Sayles, ‘cos we were born in Cambridge, you know? (JB) It was the nicest shop in Cambridge (PW) ‘cos if you got a job at Robert Sayle, that was good, wasn’t it, you had prestige.

Eventually comprising over two thirds of the population, although senior positions continued to be male-dominated. Most individuals were relatively young, with an average age of 21; only a few individuals were in their late 20s or 30s, although the housekeeper would generally be older and in her 50s or 60s. By the twentieth century all were unmarried, as married individuals had to live out, and no children were present. There was a quite rapid staff turnover, with a nucleus of long-term staff (Sieveking 2004, 52). In

the early twentieth century accommodation was gender segregated and usually shared; ‘living in may not have been ideal ... the system was adequate’ (Sieveking 2004, 48). By the 1920s individuals were trying to make their hostel rooms more comfortable. This included papering them, adding carpets and providing personal furniture (Gooch 2004, 186). By 1933/4 accommodation was mainly in single rooms with a bedstead, chest of drawers, wash stand, towel horse, chair, mirror and hanging space (Sieveking 2004, 76). Only staff who
lived in could use dining rooms and meals were ‘good quality and plentiful’; there were no formal tea/coffee breaks but time to get a ‘glass of beer’ during the day (Sieveking 2004, 48–9), which may relate to the tumblers found. Increased demand for space meant that plans to close the hostel were discussed as early as 1943, although the hostel only gradually came to an end in 1964 (Sieveking 2004, 99, 107).

Many of the ceramic vessels that were recovered may represent personal items, including a hand-painted art earthenware vase from Castle Hedingham (Fig. 5.62E) and a deaf child’s sign language plate (Fig. 5.90C). No children resided at the hostel, but as this design was registered a decade or so before the plate was deposited, one possibility is that it is someone’s treasured childhood memento, whose presence may reflect the increased employment opportunities WWI afforded deaf individuals. Other items that have a personal feel to them are a Pomadour pattern plate (Fig. 5.62C), two Queens’ College egg cups (Fig. 5.90F) and three D.B.C foot warmers (Fig. 5.91D), while some small gas mantles (Fig. 5.91F) may relate to the personal cooking of food.

A number of the glass vessels are best interpreted as personal items. These include some Codd bottles for soda water (Fig. 5.92A–C), four whisky bottles, a Morley’s bottle which also held spirits (Fig. 5.90B), beer bottles (Fig. 5.924–1), Camp Coffee, Horlick’s Malted Milk Lunch Tablets, L. Rose lime juice (Fig. 5.92I), 4711 Cologne and Ven Yusa ‘Oxygen’ face cream. The Holbrook & Co. Worcestershire sauce and Garton’s HP sauce bottles could derive from the dining room, but are perhaps more likely to be personal in origin. Interestingly, given the lack of children living at the premises, four of the Codd bottles appear to have been deliberately broken to obtain the marbles – especially as no stray marbles were recovered – while two were unbroken. Some worn out shoes were also personal possessions, as a ladies boot and shoe department did not open until 1927 and their gender balance (MNI six female and two male) and lack of children’s shoes would reflect that of the inhabitants. Other items that are personal are a toothbrush and a military button, which is presumably a memento either of a member of staff who joined up during WWI (Sieveking 2004, 55, 57) or of a sweetheart, fiancée or male relative. There are also several notable absences, the most pronounced being the total lack of flowerpots, suggesting that the plot was so heavily occupied than no opportunity for gardening remained.

Building 43 containing Well 50 continued to provide water that was used for brewing and other purposes into the 1920s. After this the well shaft was sealed and a number of small rainwater drains were inserted under the walls of Building 43 into the top of the shaft. After WWII Building 43, which became known as the ‘Round House’, was used as a storeroom for hardware and the large first floor water storage tank that it had supplied was removed in 1954 (Sieveking 2004, 100). In the early 1960s the business wanted to demolish Building 43 to improve vehicular access to the yard area and although it was noted in the John Lewis Gazette in March 1962 that the structure was ‘quite a conversation piece and many customers enquire about its origin. If it is ever demolished one of the ancient landmarks of old Cambridge and Robert Sayle’s history will disappear’, it was demolished in 1964. The shaft was then capped with concrete and a number of large drains fed into it.

The processing of down became less important during or soon after WWI and ended in 1934 (Poole 1978; Sieveking 2004, 43–4). By then some of Standing Building 48 had been converted into a coach house and in that year it became a stores and garage. The original wooden floors were removed, the gaps between the dwarf walls were infilled with loose bricks, marked CENTRAL WHITTLESEA and manufactured by the Whittlesea Central Brick Co. Ltd. (1898–1968), and a concrete floor was poured. Just to the west of this Building 44, which had been a stables, was converted into a garage. A 50-gallon petrol pump was erected in the yard area in 1927, costing £50, and stabilising disappeared as a result (Sieveking 2004, 67). In 1938 a petrol pump was located in the northeast corner of Building 44. A sunken brick-lined structure in this building relates to its use as a garage and may be an inspection pit. Building 44 was demolished in the early 1970s and the backfilling of the inspection pit contained paraphernalia associated with pumping petrol.

**Discussion**

The Robert Sayle department store was a long-lived institution, although not as long-lived as some of the other commercial entities that had previously been established in the street block; nevertheless, it operated on a much larger spatial and economic scale than any other previous or contemporary business. As a late nineteenth–early twenty-first century entity it is well-documented by cartographic, photographic, documentary evidence and even oral testimony. Yet the archaeological remains, including both standing buildings and below-ground features, do have a number of specific contributions to make to our understanding of the Robert Sayle department store.

Firstly, the remains emphasize the importance that was placed upon having an impressive façade, despite the upper storeys being of limited use as retail space (with the result that they became something of a white elephant). This circumstance led to the latter areas being used as hostel accommodation, which in turn had a strong impact upon the social history of the business. Secondly, behind the frontage the business maintained a number of specialized buildings that were constructed for particular purposes, although of these only the Down Room (Standing Building 48) survived in a sufficiently well-preserved state to permit its specialized role to be recognized. In addition, the presence of a timber-lined shaft (Well 49) and brick-built well (Well 50) emphasize the large-scale water requirements of the business and the lengths that were taken to meet this demand.

The assemblage(s) of c. 1913–21 that were recovered from Cellar 13 shed considerable light on the staff that lived in the hostel (see also Cessford 2012). For example, there is a profound contrast between the plain and unappealing ‘semi-porcelain whiteware’ that was supplied for use in the dining room and the more personal items; indeed, the gaudy Pomadour plate might be seen as a direct reaction to such plainness. The contrast between the ‘semi-porcelain whiteware’ and the Roma pattern wares that were reserved for more senior members of staff can be linked to the signalling of status, although the ‘semi-porcelain whiteware’ should not be interpreted too negatively as it appears that for tea drinking all staff enjoyed the use of good-quality bone china. There are several clear expressions of individuality, perhaps most notably the deaf child’s sign language plate and the Castle Hedingham art earthenware vase, as well as evidence for a whole range of drinks and other items that staff purchased for their own use.
These items could, to echo the testimony of Coral Gould – employee 1945–90, hostel dweller 1947–51 – make things ‘homely’ even if it was never home (see inset: ‘living above the shop’). The rosy picture painted by a semi-hagiographical history of the department store, which is unsurprisingly mirrored by the oral testimony as this derives from long-term staff who must have been at least relatively happy with their lot, is unlikely to have been held by all employees (Hosgood 1999). Indeed, such a picture can be challenged slightly by the presence of four whisky bottles, whose presence hints at a somewhat darker reality. The prevalence of items associated with women, notably shoes but also various beauty products, can be linked to the increasing role of women in the workplace, whilst the deaf child’s sign language plate indicates greater opportunities for the disabled.

By the time the Robert Sayle drapery business was established the street block was no longer part of a recognizable suburb. Nonetheless its establishment, expansion and success are to a considerable extent linked to the existence of large plots and especially the large contiguous area of the street block that was owned by Jesus College. Space is a vital prerequisite to a department store and it is clear that although Robert Sayle still faced profound difficulties, these were much less severe than those faced by many of its counterparts in the urban core such as Eaden Lilley (Ormes 2000). Although ancillary elements are undoubtedly significant, the most significant factor in a department store is retail space. The proportion of selling space compared to occupied or built-upon space in the department store complex, not unsurprisingly, changes with time. More meaningful, perhaps, is the way in which it changes. Considering ground floor level only, which is all that can be meaningfully measured, by 1862 the department store occupied 4102 sq. m, of which 1926 sq. m had been built upon but only about 217 sq. m (11.3 per cent) was selling space. By 1889 the built-upon land had increased to 2279 sq. m, of which 348 sq. m (15.3 per cent) was shop floor. Into and through the twentieth century the percentage of built-upon space increases (31.6 per cent in 1898, 53.1 per cent in 1938) as more of the site is rebuilt or converted into selling space. After 1971, when the department store lost about 20 per cent of its land holding, a significant change occurred. The built area was physically smaller than before, but represented a much higher proportion of the land available (92.2 per cent); moreover, 70 per cent (2098 sq. m) of this was now retail space.

Throughout its existence the department store remained an overcrowded and obviously piecemeal shop of ‘nooks and crannies’ (Gooch 2004, 144). This led initially to plans to move it to an out-of-town location at either Duxford (1989) or Trumpington (1994). These plans were never implemented and ultimately the desire to retain the Robert Sayle department store in the city centre was the main factor in the wholesale redevelopment of the area in the early twenty-first century. This led to the end of the Robert Sayle name, a tripling of the floor space of the rebranded John Lewis department store and culminated in the implementation of large-scale archaeological investigations.

Material culture

At Grand Arcade, on-site refuse disposal on a significant scale ceased c. 1600–20. For the succeeding 150 years very little material culture was deposited. This pattern changed c. 1760–80, around the start of the ‘classic’ industrial era, but when significant refuse disposal recommenced it was a radically different phenomenon than in the preceding mid-eleventh–early seventeenth centuries and thus presents a significant set of methodological challenges. In particular, the later material derives principally from a number of short-term deliberate depositional events that can broadly be interpreted as ‘feature groups’; closed assemblages of domestic artefacts that were discarded as a single deposit (Cessford 2009, 307–9; Cessford 2017a) and whose interpretation is not as straightforward as is sometimes assumed. The assemblages were recovered from a range of feature-types, including: the backfilling of redundant features such as cellars and soakaways; percolation fills in the base of planting beds/holes to aid drainage (Cotter et al. 1992, 161, 307–9, 450); pits dug specifically to dispose of material and, at a later date, the use of material as hardcore beneath concrete surfaces.

In the first instance, seven late eighteenth-century feature groups were recovered and studied (Table 5.2). This material has been quantified by an appropriate form of Minimum Number of Individuals/Items (MNI) count, in terms of Vessels in Studied Assemblages (VSA), and broken down in terms of function (Table 5.3), although function can be problematic to identify (Brooks 2005b). It should be also noted that large assemblages were rare and most redundant features and bases of planting beds did not contain significant amounts of material. Excluding feature groups, other contemporary features contained a variable amount of material such as pottery, clay tobacco pipe and glass vessels; some of which represents the deliberate discard of selected items. Continuing this pattern, the nineteenth-century material was also dominated by a number of large ‘feature groups’ (Tables 5.4–5.7). Whilst some of these can be dated quite precisely, at a more general level they can be broadly sub-divided into those of c. 1800–50 and those of c. 1850–1900;
the few features that cross this boundary have been assigned to the most relevant period. Finally, during the twentieth century relatively little artefactual material was deposited. The principal exceptions comprised four ‘feature groups’ (Tables 5.8–5.9), two of which were related to the Robert Sayle department store. A small quantity of additional material was also recovered from plots established beside Tibb’s Row (Chapter 3).

As in Chapter 4, the following reports primarily present a general overview, illustrated by a selection of the most pertinent examples, of a particular type of material. Additional information – including methodological statements and detailed discussions as well as further tables and figures – can be found within the supplementary digital-only volume.

**Coins and jettons** Martin Allen
Two jettons and three coins of late sixteenth/seventeenth–twentieth-century date were recovered.

There were one definite and one probable Rose/Orb type jettons of Hans Krauwinckel II (fl. 1586–1635) and a copper alloy halfpenny of George III (1760–1820). In the top of PH 3 created c. 1822–34 there was a copper alloy farthing minted 1895–1936 with the obverse and date on reverse illegible. This was deposited c. 1924–40, possibly during some changes to the property in 1937. Brick-lined *Soakaway*

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**Figure 5.94.** Assemblages of c. 1760–1940: (A) The mid-nineteenth century decline in disposal of animal bone in feature groups, as demonstrated by comparing the combined number of pottery and glass vessels and clay tobacco pipes (MNIs) against the number of animal bones (raw counts, as not all assemblages studied); (B) assemblages by functional category.
The late eighteenth–nineteenth-century whetstones found at the site are clearly different to earlier examples; they are more regularly cut and shaped and are made from white orthoquartzitic sandstone that possesses acalcareous cement. This is Permian sandstone, probably from Lincolnshire or Nottinghamshire, and as this appears to be the only type of material used for whetstones at this time this marks a break with the long-established trade in Scandinavian material dating back to the eleventh–twelfth centuries. At this time this marks a break with the long-established trade in Scandinavian material dating back to the eleventh–twelfth centuries.

A total of 24 eighteenth- and nineteenth-century worked stone artefacts were recovered, consisting principally of slate pencils and whetstones. The only significant group comprised 17 slate pencils from various features of c. 1830–50 associated with the school in Plot XIV (Fig. 5.54E–F).

The late eighteenth–mid-nineteenth-century whetstones found at the site are clearly different to earlier examples; they are more regularly cut and shaped and are made from white orthoquartzitic sandstone that possesses acalcareous cement. This is Permian sandstone, probably from Lincolnshire or Nottinghamshire, and as this appears to be the only type of material used for whetstones at this time this marks a break with the long-established trade in Scandinavian material dating back to the eleventh–twelfth centuries.

A total of 18 slate pencils were recovered, all from nineteenth century contexts; 17 came from Plot XIV which was used as a

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### Table 5.2. Studied mid/late eighteenth-century assemblages; NS = not studied, + = rare, ++ = occasional, +++ = moderate, ++++ = frequent.

<table>
<thead>
<tr>
<th>Feature</th>
<th>General type</th>
<th>Plot</th>
<th>Date</th>
<th>Pottery MNI</th>
<th>Glass MNI</th>
<th>Clay Pipe MNI</th>
<th>Bone no.</th>
<th>Bone MNI</th>
<th>Other items</th>
<th>Total items</th>
<th>Ash</th>
<th>Oyster</th>
<th>Brick/Tile</th>
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</thead>
<tbody>
<tr>
<td>PBs 7–8</td>
<td>PF</td>
<td>VIII</td>
<td>1770–90</td>
<td>75</td>
<td>10</td>
<td>8</td>
<td>246</td>
<td>NS</td>
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<td>87</td>
<td>+++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
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<td>PF</td>
<td>X</td>
<td>1760–80</td>
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<td>++</td>
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<td>PF</td>
<td>XII</td>
<td>1760–80</td>
<td>11</td>
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<td>-</td>
<td>-</td>
<td>19</td>
<td>-</td>
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<td>++</td>
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<td>60</td>
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<td>+</td>
<td>+</td>
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<td>1780–90</td>
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<td>2</td>
<td>-</td>
<td>6</td>
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<td>-</td>
<td>13</td>
<td>-</td>
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<td>XVI</td>
<td>1780–90</td>
<td>76</td>
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<td>30</td>
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<td>123</td>
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<td>67</td>
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### Table 5.3. Major mid/late eighteenth-century assemblages quantified by function.

<table>
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<tr>
<th>Feature</th>
<th>General type</th>
<th>Plot</th>
<th>Date</th>
<th>Food, storage and preparation</th>
<th>Dining</th>
<th>Other eating/drinking</th>
<th>To/after coffee drinking</th>
<th>Personal hygiene</th>
<th>Medicine</th>
<th>Smoking</th>
<th>Gardening</th>
<th>Domestic</th>
<th>Business</th>
<th>Total identified</th>
<th>Overall total</th>
<th>Variety (no. of functional types)</th>
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<td>VIII</td>
<td>1770–90</td>
<td>2</td>
<td>20</td>
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<td>11</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>-</td>
<td>-</td>
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<td>PF</td>
<td>X</td>
<td>1760–80</td>
<td>2</td>
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<td>48</td>
<td>9</td>
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<tr>
<td>PB 9</td>
<td>PF</td>
<td>XII</td>
<td>1760–80</td>
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</tr>
</tbody>
</table>
Over 2300 fragments of vessel glass weighing in excess of 180kg were recovered from Grand Arcade, plus 316 pieces weighing 8.8kg from the Christ’s Lane excavations. There were negligible quantities of medieval and post-medieval glass and the bulk of the assemblage dates to the mid-eighteenth to early twentieth centuries. A total of 887 vessels from selected assemblages have been subject to further examination. All the vessels are of well-understood types and their main contribution is to the understanding of the assemblages that they were associated with. Vessel glass

Vicki Herring

Slate pencils were produced c. 1770–1900 and in 1811 a hand-operated machine was invented that allowed an individual to produce around 1200 pencils a day. The pencils, which were typically 5½in (140mm) long and were sold in boxes of a dozen or hundred, are common archaeologically on both domestic and educational sites (Davies 2005, 63–4). The examples from Grand Arcade were mostly heavily used, worn and broken and were 32–75mm (1¼–3in) long when discarded, which is slightly longer than the 17–62mm reported for the Henry’s Mill site in Australia (Davies 2005, 65). No identifiable fragments of writing slates were recovered; these were larger objects that were stored more carefully and would in any case only be disposed of when broken (Davies 2005, 65).

Table 5.4. Studied 1800–50 assemblages by material type; NS = not studied, + = rare, ++ = occasional, +++ = moderate, ++++ = frequent.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Plot</th>
<th>General type</th>
<th>Date</th>
<th>Pottery MNI</th>
<th>Glass MNI</th>
<th>Clay Pipe MNI</th>
<th>Bone no.</th>
<th>Bone MNI</th>
<th>Other items</th>
<th>Total items</th>
<th>Ash</th>
<th>Oyster</th>
<th>Brick/Tile</th>
<th>Window glass</th>
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<td>-</td>
<td>-</td>
<td>NS</td>
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<td>109</td>
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<td>-</td>
<td>-</td>
<td>++++</td>
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</tr>
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<td>XIII</td>
<td>RF</td>
<td>1813–23</td>
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<td>23</td>
<td>4</td>
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<td>21</td>
<td>3</td>
<td>119</td>
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<td>+++</td>
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<td>129</td>
<td>-</td>
<td>++</td>
<td>++</td>
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</tr>
<tr>
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<td>FF</td>
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<td>1808–25</td>
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Table 5.5. Studied 1800–50 assemblages by function.

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<th>Dining</th>
<th>Other eating/drinking</th>
<th>Tea/coffee drinking</th>
<th>Personal hygiene drinking</th>
<th>Medicine</th>
<th>Smoking</th>
<th>Gardening</th>
<th>Writing</th>
<th>Dress</th>
<th>Domestic</th>
<th>Total identified</th>
<th>Overall total</th>
<th>Variety (no. of functional types)</th>
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<td>Abandonment</td>
<td>1800–20</td>
<td>-</td>
<td>-</td>
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<td>PF</td>
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<td>RF</td>
<td>1820–30</td>
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<td>1830–45</td>
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<td>14</td>
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Table 5.6. Studied 1850–1900 assemblages by material type; NS = not studied, P = present but not MNI, + = rare, ++ = occasional, +++ = moderate, ++++ = frequent.

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Table 5.7. Studied 1850–1900 assemblages by function.

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found within the number of bottle seals, including two of Emmanuel College (Fig. 5.60C–D), and some nineteenth–twentieth-century bottles that were embossed with the names of local firms that sold soda water and other products (Figs. 5.73E, 5.90I, 5.92, 5.95 and 6.15D).

There is some evidence that pedestal stemmed glass vessels began to be used in the seventeenth century; this is relatively late as glass vessels are found in reasonable quantities in sixteenth-century deposits elsewhere in Cambridge. The most frequent evidence for glass are fragments of free-blown thick-walled green glass wine bottles, which began to be manufactured in the 1640s and were commonplace by the 1660s (Biddle & Webster 2005, 266–7).

The eighteenth-century vessel glass is dominated by utility bottles (57 VSA; Figs. 5.23A, 5.32C and 5.33E–F), which are mainly squat cylindrical green free-blown thick-walled with pontil scars on the base and single applied collars below the lip, predominantly used as wine bottles (55 VSA). There was also a single earlier rounded octagonal shaped bottle of c. 1750–60 and an imported slim cylindrical bottle fragment. The latter may relate to an imported mineral water as does a seal (Fig. 5.23D). There were also some pharmaceutical bottles (seven VSA; Fig. 5.23B–C), these were predominantly colourless and rectangular with some with embossed lettering, and some colourless cylindrical free blown phials with pontil scars on the base and flared lips (three VSA). There were also fragments from a drinking glass (one VSA) and a bowl (one VSA).

There were a number of bottle seals, including two of Emmanuel College (Fig. 5.60C–D), and some nineteenth–twentieth-century bottles that were embossed with the names of local firms that sold soda water and other products (Figs. 5.73E, 5.90I, 5.92, 5.95 and 6.15D). During the nineteenth century glass vessels and drinking glasses become increasingly common. The majority of these are various types of utility bottle (442 VSA; Fig. 5.57A); there were also pharmaceutical bottles (62 VSA), phials (28 VSA; Fig. 5.57C–F), drinking glasses (20 VSA), jars and containers 20 VSA) and a few pieces of bowls, jugs and vases (six VSA). Some early–mid-nineteenth-century utility

<table>
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<th>Feature</th>
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<th>General type</th>
<th>Date</th>
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<th>Dinning</th>
<th>Other eating/drinking</th>
<th>Tepid/cold drinking</th>
<th>Personal hygiene</th>
<th>Medicine</th>
<th>Smoking</th>
<th>Gardening</th>
<th>Writing</th>
<th>Dress</th>
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<th>Business</th>
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<th>Brick/Tile</th>
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bottles bear the seal of Emmanuel College (Fig. 5.60C–D) and there was also an eighteenth-century seal (Fig. 5.57B). Soda and mineral water bottles are all of typical types; some, the largest group associated with the Robert Sayle department store, are of interest because they were manufactured in London, Barnsley and Leeds specifically for suppliers based in Cambridge or nearby villages (Cessford 2012) (Fig. 5.92).

*Pottery* Craig Cessford, Andrew Hall and David Hall A total of 22,889 sherds of eighteenth–twentieth-century pottery, weighing 497kg, was recovered from Grand Arcade, plus 501 sherds weighing 8kg from Christ’s Lane. The combined eighteenth–twentieth-century pottery is quantified here as a group, as it cross-cuts the chapter boundaries (Table 5.10). In this context, it is also worth noting that it appears that sherd count is a relatively reliable method of quantifying modern ceramics, as the results are similar to those for the MNI of vessels in studied assemblages. In contrast, weight over-emphasizes the significance of coarse earthenwares and stonewares and underrepresents refined earthenware and porcelain. The same also holds true of specific wares. Continuing the pattern established in Chapter 4, the sources of the various wares are mapped over time (Fig. 5.96).

As discussed in Chapter 4, only small quantities of seventeenth-century ceramics were recovered (Table 4.9), although this assemblage is augmented by material recovered from the King’s Ditch in 1914 (Chapter 3). At Ely there was a decline in the range of forms and fabrics produced in the seventeenth century; there appears to have been no production of plain pink/red ware or Broad Street Glazed Red Earthenware Bichrome, for example, and while Babylon ware and Broad Street Fineware may have continued to be produced in small quantities into the early seventeenth century this soon ceased (Cessford et al. 2006, 81–5). Production now focused overwhelmingly on Glazed Red Earthenware, which was increasingly slip decorated, reflecting the influence of the Staffordshire-type slipware industry; this material consisted principally of large bowls, pancheons, jars and small bowls plus smaller numbers of cisterns, chafing dishes and pipkins.

Documentary sources indicate that there no more than two or three master potters plus their employees were active in Ely at any time (Cessford et al. 2006, table 18). There is no evidence for any particular family traditions of potting until the arrival of John Buttey (active 1662), whose family remained prominent until the 1780s. As the seventeenth century progressed, however, it appears that in the Cambridge market Ely products were increasingly challenged by vessels from other unidentified sources.

Plain iron-glazed products, relatively similar in appearance to Babylon ware but with a browner fabric and a lighter browner coloured glaze, which were produced elsewhere in East Anglia, continued to be used until at least the mid-seventeenth century. In the latter part of the seventeenth century these are generally

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**Figure 5.95.** A light green torpedo-shaped utility bottle with applied blob top and patina. It is embossed BARKER/SON’S/CAMBRIDGE with the intertwined initials CB in a shield with TRADE MARK/REGISTERED around. Recovered from Foundation 2, constructed c. 1883–90 ([40188]). See also Fig. 6.15D.
more heavily decorated, with applied yellow coloured strips and blobs. Wares in the Midlands Yellow-ware tradition continued to be used until these were largely overtaken by similar production at Staffordshire in the late seventeenth century (Brears 1971, 31–6). There is evidence for the presence of slip decorated Staffordshire-type slipware cups and bowls, which are of rather higher quality than the Ely copies. Stoneware continued to be imported from Frechen, including one jug with an inscription, oval portrait medallions and foliage, and Westerwald stoneware appears for the first time. Tin-glazed earthenware from both the Netherlands and England also appears; although the 2005–6 excavations recovered relatively little of this the material associated with the Birdbolt Inn recovered in 1914 contained more impressive vessels that may be inn-related.

<table>
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<th>No. %</th>
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<th>Weight %</th>
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<td>28,345</td>
<td>5.7</td>
<td>65</td>
<td>2.5</td>
</tr>
<tr>
<td>Martaban-type jar</td>
<td>28</td>
<td>0.1</td>
<td>12,498</td>
<td>2.5</td>
<td>1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Sunderland-type earthenware</td>
<td>446</td>
<td>1.9</td>
<td>30,854</td>
<td>6.2</td>
<td>37</td>
<td>1.4</td>
</tr>
<tr>
<td>Art pottery</td>
<td>4</td>
<td>&lt;0.1</td>
<td>440</td>
<td>0.1</td>
<td>1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Staffordshire-type slipware</td>
<td>104</td>
<td>0.5</td>
<td>1831</td>
<td>0.4</td>
<td>22</td>
<td>0.8</td>
</tr>
<tr>
<td>Biscuit</td>
<td>8</td>
<td>&lt;0.1</td>
<td>33</td>
<td>&lt;0.1</td>
<td>6</td>
<td>0.2</td>
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<tr>
<td>Powdery fabric lead glazed earthenware</td>
<td>127</td>
<td>0.6</td>
<td>1224</td>
<td>0.2</td>
<td>16</td>
<td>0.6</td>
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<tr>
<td><strong>Total coarse earthenware</strong></td>
<td>3866</td>
<td>16.9</td>
<td>164,901</td>
<td>33.1</td>
<td>422</td>
<td>16.0</td>
</tr>
<tr>
<td>Tin-glazed earthenware</td>
<td>196</td>
<td>0.9</td>
<td>3976</td>
<td>0.8</td>
<td>35</td>
<td>1.3</td>
</tr>
<tr>
<td>Creamware</td>
<td>3196</td>
<td>14.0</td>
<td>56,430</td>
<td>11.4</td>
<td>298</td>
<td>11.3</td>
</tr>
<tr>
<td>Pearlware</td>
<td>1006</td>
<td>4.4</td>
<td>13,666</td>
<td>2.8</td>
<td>139</td>
<td>6.0</td>
</tr>
<tr>
<td>Mocha/Industrial slipware</td>
<td>171</td>
<td>0.7</td>
<td>2589</td>
<td>0.5</td>
<td>52</td>
<td>2.0</td>
</tr>
<tr>
<td>Staffordshire-type lead glazed earthenware</td>
<td>464</td>
<td>2.0</td>
<td>6995</td>
<td>1.4</td>
<td>53</td>
<td>2.0</td>
</tr>
<tr>
<td>Iron-glazed earthenware/blackware</td>
<td>163</td>
<td>0.7</td>
<td>5240</td>
<td>1.1</td>
<td>11</td>
<td>0.4</td>
</tr>
<tr>
<td>General white earthenware</td>
<td>9596</td>
<td>41.9</td>
<td>132,591</td>
<td>26.7</td>
<td>1008</td>
<td>38.2</td>
</tr>
<tr>
<td>Refined buff earthenware/yellowware</td>
<td>114</td>
<td>0.5</td>
<td>4202</td>
<td>0.8</td>
<td>11</td>
<td>0.4</td>
</tr>
<tr>
<td>Refined blue earthenware</td>
<td>32</td>
<td>0.1</td>
<td>460</td>
<td>0.1</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Refined red earthenware</td>
<td>24</td>
<td>0.1</td>
<td>784</td>
<td>0.2</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total refined earthenware</strong></td>
<td>14,962</td>
<td>65.4</td>
<td>226,933</td>
<td>45.7</td>
<td>1635</td>
<td>62.0</td>
</tr>
<tr>
<td>Nottinghamshire/Derbyshire-type stoneware</td>
<td>232</td>
<td>1.0</td>
<td>10,312</td>
<td>2.1</td>
<td>30</td>
<td>1.1</td>
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<tr>
<td>Staffordshire white salt-glazed stoneware</td>
<td>319</td>
<td>1.4</td>
<td>6189</td>
<td>1.2</td>
<td>66</td>
<td>2.5</td>
</tr>
<tr>
<td>Staffordshire scratch blue</td>
<td>34</td>
<td>0.1</td>
<td>513</td>
<td>0.1</td>
<td>6</td>
<td>0.2</td>
</tr>
<tr>
<td>18th-century London-type stoneware</td>
<td>6</td>
<td>&lt;0.1</td>
<td>553</td>
<td>0.1</td>
<td>8</td>
<td>0.3</td>
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<tr>
<td>Black Basalt</td>
<td>21</td>
<td>0.1</td>
<td>681</td>
<td>0.1</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Dry red bodied stoneware</td>
<td>5</td>
<td>&lt;0.1</td>
<td>277</td>
<td>0.1</td>
<td>2</td>
<td>0.1</td>
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<tr>
<td>Utilitarian English stoneware</td>
<td>713</td>
<td>3.1</td>
<td>56145</td>
<td>11.3</td>
<td>119</td>
<td>4.5</td>
</tr>
<tr>
<td>White bodied stoneware</td>
<td>28</td>
<td>0.1</td>
<td>2208</td>
<td>0.4</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>Frechen</td>
<td>45</td>
<td>0.2</td>
<td>4515</td>
<td>0.9</td>
<td>6</td>
<td>0.2</td>
</tr>
<tr>
<td>Westerwald</td>
<td>16</td>
<td>0.1</td>
<td>289</td>
<td>0.1</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total stoneware</strong></td>
<td>1419</td>
<td>6.2</td>
<td>81,682</td>
<td>16.4</td>
<td>258</td>
<td>9.8</td>
</tr>
<tr>
<td>Chinese export porcelain</td>
<td>173</td>
<td>0.8</td>
<td>2208</td>
<td>0.4</td>
<td>51</td>
<td>1.9</td>
</tr>
<tr>
<td>English soft paste porcelain</td>
<td>37</td>
<td>0.2</td>
<td>704</td>
<td>0.1</td>
<td>17</td>
<td>0.6</td>
</tr>
<tr>
<td>Bone china/hard paste porcelain</td>
<td>2432</td>
<td>10.6</td>
<td>20,373</td>
<td>4.1</td>
<td>257</td>
<td>9.7</td>
</tr>
<tr>
<td><strong>Total porcelain</strong></td>
<td>2642</td>
<td>11.5</td>
<td>23,283</td>
<td>4.7</td>
<td>325</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>Overall total</strong></td>
<td>22,889</td>
<td>496,799</td>
<td>2640</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Figure 5.96. The sources of ceramics used at Grand Arcade during the eighteenth–twentieth centuries, see Fig. 4.56 for earlier sources.
In the early eighteenth century Staffordshire white salt-glazed stoneware (57 VSA; Figs. 5.18K, 5.27E–F, 5.28A–C, 5.28D, 5.28E and 5.33C) became relatively common by 1720. It had largely replaced tin-glazed earthenware (17 VSA) and Staffordshire-type slipware (nine VSA). This ware dominated functions such as dining and tea drinking until the 1760s, and was also used for vessels linked to other types of drinking and hygiene. Forms related to dining were mainly plates, with various types of moulded decoration on the rims, and bowls with smaller numbers of dishes, serving dishes, sauceboats, and pickle dishes. Tea bowls were the most common form related to tea drinking, but there were also cups, teapots and teapot lids. The tin-glazed earthenware (Figs. 5.23G, 5.27E, 5.27F, 5.33D, 5.34A, 5.46H, 5.56C–R, 5.64F and 6.11F) and Staffordshire-type slipware are both rather heterogeneous groups and represent the occasional survivals of early–mid-eighteenth-century vessels and some specialized forms. Additionally, from the mid-eighteenth century onwards smaller quantities of Chinese export porcelain (24 VSA; Figs. 5.18I, 5.27H and 5.53B) and English soft paste porcelain (six VSA; Figs. 5.27G and 5.67E) were in use, principally for tea drinking, represented mainly by tea bowls and saucers plus a single slops bowl and coffee can, and a few dining-related vessels. This pattern is similar to that for English soft paste porcelain from excavations in London (Pearce 2008). Unlike other wares the Chinese export porcelain is typologically usually several decades older than the context from which it was recovered, indicating that this material was cared for and curated.

Staffordshire white salt-glazed stoneware was eventually replaced by creamware (64 VSA; Figs. 5.18I–M, 5.27D, 5.27F, 5.28E–H, 5.33B, 5.46D–E, 5.56E–F, 5.65C, 5.65A–C, 5.65E–F, 5.66 and 5.68A–B). Creamware was first produced in the 1740s and dominated the ceramic market from the 1760s until the 1780s. The creamware vessels relate mainly to dining, with plates, side plates, bowls and dishes all relatively common, plus some serving dishes or tureen stands and a condiment vessel and a sauceboat. Tea drinking vessels include tea bowls, a teapot lid, a saucer and a jug. Other drinking is represented by tankards, hygience by guglets (water jugs) and smoking by a spills vase. Creamware was itself largely supplanted by pearlware, although the distinction between the two wares is far from absolute and often amounts to no more than the glaze for pearlware containing a small amount of cobalt (Figs. 5.46C, 5.56A–D, 5.65C–I, 5.62A, 5.65D, 5.65B–D, 5.67F–H and 6.16B). Pearlware came into use in the mid-1770s and had achieved a dominant position by the 1780s. Although pearlware was in use (two VSA) it was not routinely discarded until later; it remained common until c. 1810 and both creamware and pearlware remained in limited use until c. 1830. The pattern of creamware from Cambridge is similar to that identified from excavations in London (Pearce 2007a). From the mid-eighteenth century some ceramics found in Cambridge begin to be marked with the names of individuals and institutions. Some tin-glazed earthenware of c. 1750 associated with the lessee of the Birdbolt Inn has already been mentioned (Fig. 5.34A) and the practice began to be adopted by Colleges and the cooks who worked for them in the 1760s. The practice appears to have become quite common on creamware and pearlware from the 1770s onwards; although several late eighteenth-century marked vessels were recovered they were found in nineteenth-century features.

A number of less common wares fulfilled a range of niche roles; these included decorated salt-glazed stoneware from Westerwald (seven VS; Figs. 5.18J and 5.27F) and its English equivalent Scratch Blue (six VSA; Fig. 5.32D) plus London-type stoneware (five VSA), Frechen stoneware (three VSA), Nottinghamshire/Derbyshire-type stoneware (two VSA; Figs. 5.56N and 5.61L), red-bodied stoneware (two VSA; Fig. 5.62B), and Staffordshire-type lead glazed earthenware (one VSA). There were also some wares such as Black Basalt (Figs. 5.56J and 5.67A), Blackware (Fig. 5.56K–L) and Sunderland-type earthenware (Figs. 5.72A–F and 5.90G) that were presumably in use in the eighteenth century, but are not present in assemblages until the early nineteenth century.

Two more locally produced forms of pottery are Late Unglazed Earthenware (22 VSA) and Late Glazed Red Earthenware (13 VSA–D). Late Unglazed Earthenware (Figs. 5.18A–C, 5.42D and 5.43A–D) consists solely of flowerpots and associated saucers, these occur in a wide range of fabrics and a variety of sources are represented. Flowerpots were being produced in Cambridge by the early eighteenth century, and a kiln has been excavated at Thompson’s Lane (Firman & Pullinger 1987). Flowerpots with a distinctive yellow fabric, identified as being produced in Cambridge, were found in contexts dated c. 1760–1825. In contrast the Ely potteries do not appear to have produced flowerpots until the nineteenth century and the source of some of the flowerpot fabrics is unclear, although there are a range of relatively poorly understood vernacular potteries in Essex, Norfolk and Suffolk (Breams 1971) that could have supplied Cambridge.

The Late Glazed Red Earthenware vessels (Figs. 5.28K– and 5.46F–G) were produced at Ely and represent the continuation of a long-established industry, although its eighteenth–nineteenth-century phase has received relatively little attention (Breams 1971, 170; Cessford et al. 2006, 83–5, tab. 18; Rackham 1987, 8–9). The turn of the eighteenth century many local industries had been put out of business by the rise of Buslem and Ticknall in Staffordshire as major manufacturing centres. The Ely pottery industry survived this onslaught and continued to produce wares that were in an essentially local pre-industrial vernacular tradition (Breams 1971). Documentary sources indicate that during the eighteenth century there were between two and four master potters active in Ely at a time, with around a dozen employees. The Butley family appears to have been particularly prominent between the late seventeenth century and the 1780s. Following marriage this became the Lucas family who dominated production until the 1840s. Archaeological evidence from a range of sites in Ely and Cambridge indicates that by the eighteenth century Ely potters were producing a more restricted range of fabrics and forms than in the sixteenth–seventeenth centuries. Large bowls were the most common form, plus smaller numbers of jars, dishes and chamber pots. The Ely potters also appear to have produced some rather more high quality items; although none of these have been recovered from excavations it is likely that they were in use in Cambridge so this element of their repertoire should be borne in mind.

The bulk of the nineteenth-century ceramics from the Grand Arcade site are mass-produced wares, manufactured principally in Staffordshire. Dining, tea related wares and a range of other types continued to be made of creamware (234 VSA) and pearlware (156 VSA) until c. 1820–30 (Sussman 1977) and eighteenth-century Chinese export porcelain continued in use (26 VSA). Although some Staffordshire-type white salt-glazed stoneware was present in assemblages up to c. 1850 (eight VSA) much if not all of this may have been recovered from excavations it is likely that they were in use in Cambridge so this element of their repertoire should be borne in mind.

Decoration, particularly transfer-printed decoration which had been developed as early as c. 1783 becomes much more common from c. 1805 and common from c. 1820 onwards (622 VSA) although the distinction between the two wares is far from absolute and often amounts to no more than the glaze for pearlware containing a small amount of cobalt (Figs. 5.46C, 5.56A–D, 5.65C–I, 5.62A, 5.65D, 5.67B–D, 5.67F–H and 6.16B). Pearlware came into use in the mid-1770s and had achieved a dominant position by the 1780s. Although pearlware was in use (two VSA) it was not routinely discarded until later; it remained common until c. 1810 and both creamware and pearlware remained in limited use until c. 1830. The pattern of creamware from Cambridge is similar to that identified from excavations in London (Pearce 2007a). From the mid-eighteenth century some ceramics found in Cambridge begin to be marked with the names of individuals and institutions. Some tin-glazed earthenware of c. 1750 associated with the lessee of the Birdbolt Inn has already been mentioned (Fig. 5.34A) and the practice began to be adopted by Colleges and the cooks who worked for them in the 1760s. The practice appears to have become quite common on creamware and pearlware from the 1770s onwards; although several late eighteenth-century marked vessels were recovered they were found in nineteenth-century features.

A number of less common wares fulfilled a range of niche roles; these included decorated salt-glazed stoneware from Westerwald (seven VS; Figs. 5.18J and 5.27F) and its English equivalent Scratch Blue (six VSA; Fig. 5.32D) plus London-type stoneware (five VSA), Frechen stoneware (three VSA), Nottinghamshire/Derbyshire-type stoneware (two VSA; Figs. 5.56N and 5.61L), red-bodied stoneware (two VSA; Fig. 5.62B), and Staffordshire-type lead glazed earthenware (one VSA). There were also some wares such as Black Basalt (Figs. 5.56J and 5.67A), Blackware (Fig. 5.56K–L) and Sunderland-type earthenware (Figs. 5.72A–F and 5.90G) that were presumably in use in the eighteenth century, but are not present in assemblages until the early nineteenth century.
of the correct date and composition from Grand Arcade that might reasonably be anticipated to contain these patterns; in total 89 Willow pattern vessels were found in 19 of these whilst Asian Pheasants pattern vessels were rather less common, with 26 vessels in seven assemblages. In all assemblages Willow pattern was as prevalent as or more common than Asian Pheasants. In addition there are a small number (MNI five) of Staffordshire-type figurines (Figs. 5.57K and 5.68C). The rather finer quality bone china (131 VSA) was introduced c. 1794 and became relatively common from c. 1820 onwards, being used principally for items linked to tea drinking, most commonly decorated with either a gold depiction of a tea leaf or alternating large and small purple sprigged plant sprays.

Utilitarian English stoneware appears c. 1800-20 (98 VSA; Figs. 5.53H-J, 5.61J, 5.61L-M, 5.74G and 5.91D), although Nottinghamshire/Derbyshire-type stoneware continued in use (28 VSA). The majority of the Utilitarian English stoneware from Grand Arcade cannot be specifically identified, but manufacturers that are represented include Malting (Newcastle), Powell (Bristol), George Skey & Co. and Bourne & Son (Staffordshire), Radnor Park and the Shipley Pottery (Derbyshire) and the Union Potteries and John Cliff & Co. (Lambeth), some of which were also found in Colchester (Cotter 2000, 254). Utilitarian English stoneware was used principally for containers; including bottles for ink (MNI 22), blacking (MNI six) and a range of other liquids (MNI 38), plus jars (MNI 30) and wide mouthed jars (MNI 18), which held various types of food including marmalade, and foot bottles (MNI seven). Rarer forms include a mug (MNI one), a jug (MNI one) and a teapot (MNI one). From c. 1870 onwards there is evidence that various local wine and spirits merchants had specially marked domed top jars or flagons produced for them, although there is no evidence where these were manufactured.

There is limited evidence for the continued use of Staffordshire-type slipware (12 VSA) in the form of cups and bowls, and tin-glazed earthenware (18 VSA), predominantly drug/ointments jars (Figs. 5.49F and 5.59O-R) plus a char dish (Fig. 5.64F). Staffordshire-type earthenware (18 VSA), predominantly drug/ointments jars (Figs. 5.49F and 5.59O-R) plus a char dish (Fig. 5.64F), Staffordshire-type lead-glazed earthenware began to be used by the 1840s; although it is more common in the latter part of the century (35 VSA), it was used for a range of forms particularly teapots.

Coarser earthenware products continued to be produced at Ely until the 1860s, consisting principally of Late Glazed Red Earthenware (42 VSA) bowls, jars and dishes whose forms, fabric and glaze are indistinguishable from eighteenth-century products, plus some new forms principally chamber pots. There were also flowerpots in a range of Late Unglazed Earthenware fabrics (152 VSA), including some produced by the last known Ely potter Robert Sibley (Fig. 5.43A). The Ely potters also produced occasional higher quality pieces that appear to be one-off special commissions, which have been preserved in collections rather than being recovered archaeologically.

During the course of the nineteenth century the Ely Late Glazed Red Earthenware industry came under increasing competition, principally from Sunderland-type coarserware (35 VSA). This ware first occurs in Cambridge in the early nineteenth century, but was of relatively limited significance until the end of the Ely pottery industry when it briefly dominated the market in large utilitarian vessels c. 1870-80. After this Yellowware, which was used in small amounts from c. 1830 onwards and came to dominate the market nationally by c. 1880, was used (three VSA). In addition in the first half of the nineteenth century blackware or iron-glazed earthenware with a red fabric and black glaze was used for chamber pots and bowls (eight VSA), although the fabrics and glazes for the two forms are different suggesting separate sources.

A range of less common wares were also found; notable pieces include an imported Martian-type jar (Cellar 12; Fig. 5.62D), a red bodied stoneware vessel decorated with a classical scene (Cellar 12; Fig. 5.62B) and a teapot (Cellar 7), two bottles from Frechen (Cellar 4) and a Black Basalt teapot (Soosankay 3) and teapot lid (Cellar 4).

In the early twentieth century the dominant pottery fabric continued to be white ware (367 VSA), which fulfilled most of the dining requirements. The Robert Sayle department store-associated assemblage(s) contained a large number of plain vessels, some of which have transfer-printed marks describing them as ‘semi-porcelain’ (43 VSA; Fig. 5.90A-B). At this time terms such as ‘semi-porcelain’ were used extensively as brand names for marketing purposes as they were associated with strength and durability, but they do not necessarily mean that the vessel is made of that particular fabric (Brooks 2005a, 30). Additionally, although degree of body vitrification can be significant, those attempting to classify wares by this ‘are splitting hairs by trying to distinguish among ceramic bodies that are simply points on a continuum’ (Majewski & O’Brien, 1987, 120). These vessels are of a white ware fabric of noticeably greater hardness and density than the rest of the assemblage; such wares of this date are often termed ‘hotel ware’ (Barker & Majewski 2006, 216-17; Myers 2016), although it is perhaps safer to restrict this term to those that bear specific institutional affiliations. As a result the term ‘semi-porcelain white ware’ will be adopted to distinguish this material, with the proviso that this is a label rather than a technically accurate descriptor.

The other common ware was bone china (171 VSA), used predominantly for tea and coffee drinking. All other fabrics were much less common and were used for specific niche functions, such as Utilitarian English stoneware (27 VSA) used for food storage, foot warmers and ink bottles, and Late Unglazed Earthenware (26 VSA) used solely for flowerpots all of which were manufactured by Sankey’s of Bulwell, Nottinghamshire (see Fig. 7.2Q). Sankey’s products appear not to occur in Cambridge until the 1890s at the earliest, although they are known to have been supplying Ely by the 1860s. Sankey’s ‘garden pots’ were sold at Barrett & Co. in the 1920s and by this time Sankey’s were producing 500,000 flowerpots a week. Staffordshire-type lead and iron-glazed earthenware (23 VSA and three VSA) were used predominantly for teapots, while some vessels were made from a lead-glazed earthenware with a distinctive poor quality powdery white fabric almost akin to Plaster-of-Paris (16 VSA). Large food preparation vessels included Sunderland-type earthenware (six VSA) and Yellowware (three VSA). Biscuit pottery, which has been fired once to a temperature just below vitrification and had no glaze added, was used to produce what may be gas mantles (two VSA) (Fig. 5.96F). There was a single piece of ‘art’ pottery, a hand-painted vase from Castle Hedingham (Fig. 5.62E). An art pottery studio was founded by Edward Bingham at Castle Hedingham, Essex, and was active 1864-1901 (Bartlett 1993, 53; Bradley 1968). This led to the area becoming a centre for art pottery and this piece is by a later potter.

Clay tobacco pipes

Craig Cessford, incorporating specialist information from Alan Vince

In total, 1501 fragments of clay tobacco pipe weighing 6970g were recovered from Grand Arcade, representing at least 220 pipes (MNI); there were also 306 fragments weighing 1495g and representing at least 36 pipes (MNI) from Christ’s Lane. In addition there were also three objects made from pipeclay: a wig curler, a mouthpiece shaped item and a hollow cone shaped item. Information on local makers derives largely from Cessford (2001c), although subsequent unpublished research has modified some of the identifications and dating of manufacturers. It appears that the earliest clay tobacco pipes – of c. 1580–1630/40 (see Chapter 4; Fig. 4.60F) – were imported from London (Fig. 5.97). Following on from this almost all the pipes were produced
Local production begins
London monopoly
Tobacco crop at Jamestown
Sir Walter Raleigh
Sir Francis Drake
Sailor smoking in Bristol
Columbus

1500

1600

1700

1800

1900

London and Broseley products
Effective end of clay pipes
End of local industry

Newmarket Road area — Anne Pawson
production begins

James Pawson
Samuel Wilkinson
James Kuquit

John William Saul

Figure 5.97. Timeline for clay tobacco pipes in Cambridge.
locally in Cambridge until the mid-nineteenth century, when a few London pipes are present, while from other sites it is known that pipes from Broseley also began to arrive in the town.

The use of clay tobacco pipes increased during the seventeenth century, becoming relatively common after c. 1660, although most of the material comes from the garden soil. The earliest documentary evidence for pipe production in Cambridge was the will of Rodger Smith, who died in 1647, and it is possible that local pipemaking did not begin until the charter granting London pipemakers a virtual monopoly ended in 1639 (Oswald 1975, 7–9). After this it appears that Cambridge pipemakers dominated the local market. Production was nonetheless small-scale with only one or two pipemakers plus their employees. Some of these pipemakers were based nearby during the late seventeenth–early eighteenth centuries, and associated material was recovered from the King’s Ditch in 1914 (Chapter 3). None of the seventeenth-century Cambridge pipemakers appear to have marked or decorated their pipes; their products generally lack a high degree of finish and are almost exclusively of broad heel forms with few spurred examples. Wig curlers were rare, with just a single example from Christ’s Lane (Fig. 6.11G).

A range of pipes were studied using Inductively Coupled Plasma Atomic emission Spectroscopy (ICP-AES) and in common with most British clay tobacco pipe production the Cambridge makers largely utilized Dorset/Isle of Wight Tertiary ball clay (Cessford 2011). The exception is a single pipe dated to c. 1600–40; this had a markedly different composition which is similar to certain East Midlands pottery such as Developed Stamford ware. It seems likely that this pipe was made using white-firing middle Jurassic clays found in Lincolnshire and Northamptonshire. The clay may have come from Northampton Field, on the east side of Northampton, which lies in an area of Jurassic clay of the Estuarine Series and in the early eighteenth century it was reputed to be the finest in the land. It was exploited from at least c. 1665/75 until 1771, before it became exhausted c. 1771–1830 (Moore 1980, 4–5) and this is the first time that it has been identified using ICP-AES. ICP-AES suggests that the single wig curler was also manufactured locally using Dorset/Isle of Wight Tertiary ball clay.

By the eighteenth century, clay tobacco pipe production was well-established in Cambridge. There appear to have been three or four makers at any point in time and there is no evidence that any pipes from elsewhere were being used in Cambridge. The pipes are of variable quality. Initially, as in the seventeenth century, broad heel forms dominate but from c. 1760 spurred examples become more common. Decoration is relatively rare and only a few Cambridge makers marked their pipes. Makers who did mark their pipes and whose products were recovered included James Kuquit (Fig. 5.22A), Samuel Wilkinson (Figs. 5.23H and 5.27K) and James Pawson (Fig. 5.34G). These makers all occupied the same premises in Sidney Street (Cessford 2001a) and in some senses their products form a local quasi-familial ‘lineage’ of products that continued into the nineteenth century. As well as being decorated and bearing their maker’s name, Wilkinson’s, and to a lesser extent Pawson’s, pipes are of visibly superior quality and finish to many of the unmarked eighteenth-century pipes, which were presumably produced by other local makers. The fact that these pipemakers were wealthier and more successful than their competitors is also reflected in the fact that they have left fuller documentary records, notably in sources such as Poll Books. There is therefore a danger that the higher documentary and archaeological visibility of certain makers can lead to a self-reinforcing focus upon them to the exclusion of other makers, creating a warped view of the industry.

Clay tobacco pipe manufacturing continued in Cambridge for much of the nineteenth century. At the beginning of the century James Pawson, succeeded by his widow Anne. Although the kiln continued in operation after Anne’s death in the 1820s, its products rapidly became less archaeologically visible, and the main focus of production shifts to the rapidly expanding Barnwell suburb. From the 1870s onwards Broseley and London products begin to occur in Cambridge and the local industry went into rapid decline, ending in the early 1890s. Cambridge pipemakers were also probably producing other items made of pipeclay as a minor side-line.

Clay pipes produced in Cambridge are only occasionally marked; a few examples that can be linked to known makers including the Balls family, Anne Cleaver, James Kuquit and Thomas Moule were recovered. The most commonly marked pipes relate to Samuel Wilkinson and James and Anne Pawson. Samuel Wilkinson (active by 1762, died 1787) produced pipes with two slightly different types of Wyer style stem decoration (Walker & Wells 1979, 5–12) and his niece’s husband James Pawson (active 1786, died 1813) who inherited the business also produced pipes with two slightly different types of Wyer style stem decoration, although he or possibly his wife Anne Pawson (inherited the business 1813, died 1823) eventually switched to a rather different style of stem decoration. These makers successively occupied the same premises in Sidney Street (Cessford 2001a) and supplied Cambridge and its immediate surroundings, although pipes produced by Wilkinson have been found at Ely (23km distant) and Huntingdon (27km distant) and those of Pawson at Bury St Edmund’s (41km distant; Heard 2009, 5). This reflects a general pattern, as clay pipes are typically found within 25km of their place of manufacture and occasionally up to 40km (Oak-Rind 1980).

At Grand Arcade the total length of pipe stem recovered was 59.8m, giving c. 270mm of stem per pipe. The stem length of pipes changes through time and also varied at any given point between different makers and even different types of pipe by the same maker. Early pipes could be as little as c. 100mm long; this increased over time with a typical length of c. 360mm, although some could be as long as c. 910mm (Boothroyd & Higgins 2005; Jarzemkowski & Jarzem bowski 1981). This suggests a potential recovery rate at Grand Arcade of c. 75 per cent.

It was notable that many eighteenth–nineteenth-century features, such as cellars, which contained substantial numbers of pottery and glass vessels contained relatively few clay tobacco pipes. There were only a few with 10 or more clay tobacco pipes and the largest group (MNI 17) relates to collegiate usage. It should, however, be noted that even these groups are relatively small in comparison to some features from other British cities where hundreds of pipes have been recovered from individual
features. The infilling of such features was a relatively uncommon event, occurring only one or two times a century on any individual plot. The evidence suggests that clay tobacco pipes were frequently deposited in garden soil, a phenomenon recognized elsewhere where c. 120 were recovered from a single garden perhaps implying the loss of 10 per year (Higgins 1985). At the Grand Arcade site it appears that up to c. 1500 clay tobacco pipes were deposited in one particular garden, equating to around five per year. It appears that clay tobacco pipes were relatively much more likely to be deposited in garden soil rather than in ‘feature groups’. This contrasts with contemporary ceramic and glass vessels and suggests that different depositional strategies were in action.

Clay pipes may have entered the garden soil either directly or via middens, and were disposed of relatively immediately. The larger, and potentially more hazardous, ceramic and glass vessels may have in effect been ‘stockpiled’ and disposed of less frequently and more ‘formally’. Something of the relative patterning of deposition can be identified by comparing material types from particular features. The length of stem per pipe in the three features with the largest numbers is 132mm (Cellar 7), 198mm per pipe (Soakaway 3) and 346mm (Cellar 4) respectively, while the values for the two most investigated garden soils are 232mm and 248mm. The reasons for this variation are unclear, but it does seem that a substantial quantity of stem is missing from some features; perhaps because some pipes continued to be used after their stems were partially broken and this earlier breakage material was disposed of elsewhere.

18 samples of clay tobacco pipe and one wig curler from a number of sites in Cambridge were submitted for analysis of the pipeclay using Inductively Coupled Plasma Spectroscopy. The results indicated that the pipes could be divided into six groups, which correspond to a chronological sequence:

1) Group 5 (early) c. 1580–1620/30
2) Group 1 c. 1620/30–40/50
3) Group 6 c. 1640/50–1750/60
4) Groups 4 and 5 (late) c. 1750/60–1810/20
5) Group 3 c. 1810/20–1830
6) Group 2 c. 1830–70

The majority of the pipes were made of Dorset/Isle of Wight Tertiary ball clay, which is known to have been used by London pipemakers and is recorded as being traded to King’s Lynn by the 1660s. The exception to this was an unmarked early seventeenth-century pipe of c. 1600–40, which may relate to the earliest phase of local clay pipe production in Cambridge c. 1620–45 and was probably made of clay from Northampton.

### Table 5.11. The Grand Arcade ceramic building materials assemblage by date. MT - Minimum number of Tiles per context, derived by dividing the number of corners present by the number of corners for a complete piece. TE - Tile Equivalent, a percentage based on the number of corners present.

<table>
<thead>
<tr>
<th>Period</th>
<th>No. (%)</th>
<th>Weight (%)</th>
<th>Corner (%)</th>
<th>MT (%)</th>
<th>TE (%)</th>
<th>MSW (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11th–12th</td>
<td>0.35</td>
<td>0.22</td>
<td>0.24</td>
<td>0.38</td>
<td>0.26</td>
<td>142.7</td>
</tr>
<tr>
<td>13th</td>
<td>0.09</td>
<td>0.02</td>
<td>-</td>
<td>-</td>
<td>45.9</td>
<td></td>
</tr>
<tr>
<td>14th–15th</td>
<td>13.02</td>
<td>3.50</td>
<td>2.85</td>
<td>6.83</td>
<td>4.10</td>
<td>60.2</td>
</tr>
<tr>
<td>13th–15th</td>
<td>27.69</td>
<td>1.00</td>
<td>0.97</td>
<td>1.20</td>
<td>1.01</td>
<td>8.1</td>
</tr>
<tr>
<td>16th–17th</td>
<td>41.63</td>
<td>15.49</td>
<td>12.51</td>
<td>39.19</td>
<td>16.07</td>
<td>63.4</td>
</tr>
<tr>
<td>18th–19th</td>
<td>15.78</td>
<td>77.73</td>
<td>81.10</td>
<td>50.60</td>
<td>76.37</td>
<td>1104.0</td>
</tr>
<tr>
<td>N/A</td>
<td>1.44</td>
<td>2.04</td>
<td>2.34</td>
<td>1.80</td>
<td>2.19</td>
<td>318.0</td>
</tr>
</tbody>
</table>

Ceramic building material Philip Mills, incorporating specialist information from Alan Vince

Overall, 9121 pieces of ceramic building material weighing 2053kg were recovered from Grand Arcade, plus 116 pieces weighing 122kg from Christ’s Lane (Table 5.11). The bulk of the assemblage is seventeenth-century and later in date. For this reason, the patterns present within the overall assemblage (including material previously reported upon in Chapter 4) will be discussed here.

Slop moulded bricks are introduced in the sixteenth century, as in other parts of the country, and there is a standardization in size and increasing evidence of mass-production from the eighteenth century onwards. Brick supply is dominated by the area around Ely although there is a widening of sources from the eighteenth century, with production beginning at Cambridge itself. It appears that different plots may have obtained their bricks from different sources, although the limitations of the data make this conclusion problematic. Roof tiles are predominately peg tiles, mainly with two rounded peg holes although there is a specifically nineteenth-century usage of peg tiles with one off set rounded peg hole and eighteenth- and nineteenth-century usage of pan tiles. Tile supply is also dominated by the Ely area, as in the rest of the region. Roof tile seems to be relatively mixed in colour until the eighteenth century when yellow came to be favoured, changing the appearance of roves in the area.

Although the vast majority of the brick and tile continued to come from Fenland sources, located on or near the Isle of Ely, during the seventeenth century there is evidence that this was a time of change and development in the local supply. It also appears that there was an increasing complexity in the types of bricks used in the later seventeenth century. Pan tiles were also introduced, although their usage appears to have been limited.

During the eighteenth century there was a major increase in the amounts of brick being used in Cambridge. Although Fenland sources located on or near the Isle of Ely still dominate, the precise
sources appear to have varied and widened, and from the mid/late eighteenth century onwards there is evidence for local Cambridge-based production. Well-levigated machine-cut bricks began to be produced and specialist drain forms began to be made, both of which were employed at Grand Arcade.

The nineteenth century witnesses a continuation of trends apparent in the eighteenth century and the amounts of brick being used at Grand Arcade increases exponentially. Fenland sources, on or near the Isle of Ely, are still important but local Cambridge-based production comes to dominate. There is also evidence for the occasional use of bricks from as far afield as Bedfordshire, while other sites in Cambridge have produced evidence for bricks from the Birmingham area (Newman 2009b), presumably transported by rail. Froged and perforated bricks begin to be commonly employed by c. 1850 at the latest and there is evidence for several forms of specialist drain manufactured on or near the Isle of Ely (Figs. 3.25B–C and 5.98), as well as more decorative architectural elements (Fig. 3.25F).

The production of brick and tile in Ely is partially related to the pottery industry. Excavations at Potters Lane have revealed evidence for peg tile production in the thirteenth–fourteenth centuries, with production of crested ridge tiles and small thick floor tiles in the fifteenth century (Spoerry 2008, 27–9, 64). There is also evidence that glazed drain tiles were produced at Ely. The earliest documentary evidence for production dates to the second half of the fifteenth century, when there was a ‘tyle kylne close’ at Barton Farm (Lucas 1993, 157). Prior to this there are records that in 1339 bricks and tiles were imported to Ely from King’s Lynn and Wisbech (Lucas 1993, 157), bricks were also supplied to Ely from Emmeth in 1355–6 and Wiggenshall c.1454 (Lucas 1993, 157). In 1681 Thomas Baskerville noted that ‘the great trade of this town [Ely] and the country hereabout is the making of bricks and earthenware, for which purpose they have excellent sorts of earth’ (quoted in Lucas 1993, 158). The industry was also mentioned by later observers and is well-documented throughout the seventeenth–eighteenth centuries. Brick and tile production continued in Ely into the nineteenth century and the tithe map of 1843 indicates seven locations where manufacturing had occurred, although the industry appears to have declined rapidly in the 1850s–60s (Lucas 1993, 161).

The clays in the vicinity of Ely include Kimmeridge Clay, Gault Clay and alluvial clay (Gallois 1988). It has been argued that bricks made from the different clays can be identified by their different colourings, with Kimmeridge Clay products being reddish brown, alluvial clays a range of ‘brindled or mottled hues’ and Gault clays buff or white (Lucas 1993, 158). In fact it appears likely that all the Ely products are made from the Kimmeridge Clay (Firman 1998). In part this arises from a confusion between the term ‘gault bricks’, which is applied generically to all buff or white bricks even when they are not made from Gault Clay strictly speaking. The Kimmeridge Clay is composed of a large number of beds with different compositions, which would produce a wide variety of different fabrics and colours. During the time when the Ely brick and tile industry was active the clay to produce bricks and tiles would be dug by hand, either following individual beds or in ‘lifts’ up to 2m high. The fabric, texture and colour of the bricks and tiles would therefore closely reflect the lithology of the individual bed or the group of beds in an individual ‘lift’.

The Kimmeridge Clay around Ely was capable of producing ‘brick red’ bricks from darker mudstones; reddish brown bricks from medium grey mudstones and a range of yellow, buff and cream bricks from the more calcareous palest mudstones. This identification of all the clays used as deriving from Kimmeridge Clay is confirmed by the more geologically informed contemporary observers (Firman 1998). In the 1880s Thomas Roberts examined the strata in the still working or recently abandoned brick pits in and around Ely and identified the ‘solid’ formations as Kimmeridge Clay of Upper Jurassic Age (Roberts 1892). Thomas McKenny Hughes the Woodwardian professor of geology also stated that Ely bricks were made of Kimmeridge Clay (Hughes & Hughes 1909, 113). The Kimmeridge Clay formation was surveyed using boreholes by Gallois, who produced a detailed bed by bed description demonstrating that the more calcareous beds were favoured for brick making, and that they produced yellow or brown bricks (1988, 89). The Ely fabrics have been split into five broad groups, which can be further subdivided.

1) Ely area pottery type fabrics: these fabrics tend to have a very hard black reduced core with buff to red margins and calcareous inclusions. Forms include peg tiles and ridge tiles, some of which are crested. They are often glazed, with the ridge tiles especially having an even thick green gloss glaze, although tiles tend to have patches or stripes of thin green, yellow or brown glazes. Visual inspection suggested that these fabrics and glazes were similar to those use by potters at Ely; further analysis showed that they are varied in appearance in thin section but form a group chemically. They appear to have been made from Jurassic clays, either being highly organic, with a black core and sharp core/margin boundary, or calcareous. The thin sections indicate the presence of a mixed detrital sand, in which the finer grade grains are of Triassic origin and the coarser grade grains are of Cretaceous origin. Similar coarse sands occur in pottery produced at Colne and found at Huntingdon, classified by Spoerry as Hunts Fen Sandy ware and Colne-type ware. Chemical analysis confirms the similarity of the two Cambridge fabrics to the Colne and Huntingdon wares, but with a stronger similarity to Huntingdon. The river gravel found at Huntingdon and Colne also outcrops around Cambridge, but how similar the Cambridge gravel is to that found in these fabrics is not known, since none has been sampled. However, there is no source for Upper Jurassic clay in the immediate area of Cambridge and the closest possible source lies about five miles to the north-west. In Cambridge the occurrence of these fabrics appears to be related to the proximity of thirteenth–fourteenth-century building activity in close proximity to the site. As well as Ely itself these fabrics have been identified at
Doulton commences production of stoneware pipes

Doulton factory making salt-glazed stoneware pipes with non-leaking joints

Doulton commences production of stoneware pipes

Figure 5.98. Late eighteenth–nineteenth-century developments in drain-types used at Grand Arcade.
King’s Lynn (Mills in Cope-Faulkner 2000a) and Boston (Mills in Cope-Faulkner 2000b), as well as much further up the east coast at Newcastle (Mills in Mabbitt 2006) and Berwick (Mills in Mabbitt & Frain 2007).

2) Ely area sandy red (darker mudstone beds of Kimmeridge Clay): these are a red sandy fabric, with a range of minor variation in firings and size and sorting of inclusions. Forms include peg tiles, crested ridge tiles and bricks and they occur from the twelfth century onwards, although some variants do not appear until the thirteenth/fourteenth centuries and the fourteenth/fifteenth centuries. Production of these fabrics appears to cease by the eighteenth century. Thin section and ICP-AES examination of one of the earlier fabrics indicated that the bricks have a variable appearance in thin section and appear to be made from a mixture of silty clay of recent date and Jurassic marl. The ICP-AES analysis indicates that the bricks are all more similar to each other than to any of the other samples and that they form a distinct group, unrelated to other samples.

3) Ely area reddish brown (medium grey mudstone beds of Kimmeridge clay): a reddish brown fabric that was used rarely for bricks, but more commonly for tiles.

4) Ely area buff and white (lighter calcareous mudstone beds of Kimmeridge clay): although traditionally described as ‘gault bricks’ these are not made of Gault Clay.

5) Ely area mixed red and yellow (mixed darker mudstone and lighter calcareous mudstone beds of Kimmeridge clay): these fabrics do not display the pure yellow colour that perhaps should be expected with pure Gault bricks, and comprise a mixture of red and yellow lenses, in varying amounts depending on fabric, and inclusions.

Thus the Kimmeridge Clay in Cambridgeshire was capable of producing almost black bricks from inter-bedded oil shales; brick red bricks from darker mudstones; reddish brown bricks from medium grey mudstones, and a range of yellow, buff and cream bricks from the more calcareous palest mudstones.

There is a small quantity of late twelfth–thirteenth/fourteenth-century glazed relief decorated floor tiles (van Lemmen 2000) and examples of plain mosaic tile, of the same period. The plain tiles were also probably produced at Ely; the quantities involved and the distribution of the material, which is scattered across a range of plots rather than being concentrated, suggest that the material does not relate to their use at the Grand Arcade site. It appears more likely that they arrived later as refuse or rubble from elsewhere. Much smaller excavations at the Dominican friary on the opposite side of St Andrew’s Street produced a much more substantial assemblage of decorated floor tile (Dickens 1999a; see also Chapter 6) and it is likely that all the material at Grand Arcade arrived after the Dissolution, either from the Dominican friary or other religious houses in Cambridge.

The earliest surviving brickwork in Cambridge is in the vault of the bone-hole of St Mary the Less dated to c. 1350, and there is documentary evidence for the use of brick at King’s Hall (1375–6) and Gonville & Caius College (c. 1390) (RCHM(E) 1959, c). The fine quality of brickwork veneer with traces of diamond or diaper patterning at Queens’ College of 1448–9 is the earliest extensive use of exposed brickwork (RCHM(E) 1959, c). Bishop Alcock’s work at Jesus College started 1496 and dated c. 1500 the diaper work near the top of the gatehouse represents the earliest ‘conscious’ use of white brickwork, although some is suffused with pink (Pevsner 1954, 74; RCHM(E) 1959, c). When St John’s College First Court was being built in 1511–16 the brickmaker was one Recluver of Greenwich and the College paid his travelling expenses, suggesting an absence of local expertise. These bricks appear to have been purpose made and were fired using wood from Coton (RCHM(E) 1959, c). The use of brickwork by colleges became common in the sixteenth century, some of which was obtained from Ely (Lucas 1993, 158; RCHM(E) 1959, c). As well as its use by the Colleges there are sixteenth-century documentary records of brick boundary walls around domestic plots (1546, 1574–5) and named bricklayers are first attested in the 1540s (Richard Mason 1544; Charles Palmer 1546).

In the seventeenth century there is further documentary evidence for local production. In 1622 brick earth was dug for Talbot Pepys in Arbury Meadow and the bricks were piled in clamps (Wright 2002, 25). This relates to the exploitation of the loam from the extensive deposits of gravel, sand and inter-bedded loams which stretch north from Cambridge to Histon and Impington (Worssam & Taylor 1969, 111–12). The name Brickhill Lane in West Field is mentioned slightly later in 1634 (Worssam & Taylor, 1969, 111–12). When Clare College was rebuilt in 1636 brick earth was obtained for local production, whereas in 1639 the College bought bricks from Ely (RCHM(E) 1959, c). There are seventeenth-century records of non-collegiate domestic brick buildings, including a ‘little brick house’ (1659) and a messuage ‘newly erected in brick’ (1673). A considerable number of bricklayers are known from wills and apprenticeship indentures and there is the earliest named local brickmaker Richard Hallet (1636).

From the early eighteenth century large houses incorporated gauged, rubbed or moulded brick features and two-coloured brickwork (RCHM(E) 1959, ci). These were often ‘hung’ on existing timber framed buildings as a cheaper alternative to rebuilding in brick; the use of brick and tile was often restricted to the conspicuous frontages of the houses. The increasing use of ‘white’ brick potentially relates to aesthetic ideas of colour harmony as ‘there is something harsh in the transition from red brick to stone, and it seems altogether unnatural; in the other, the grey stocks come so near the colour of stone that the change is less violent, and they may
sort better together', although the fact that the grey are cheaper also had an effect (Ware 1756, 60–1). One local bricklayer John Brewer, who died in 1706, had a substantial number of freehold and leasehold plots in the town indicating that he was relatively wealthy. Brick and tile grounds in Chesterton parish were for sale in 1792 (Wright 2002, 25).

An early eighteenth-century kiln was excavated at Thompson’s Lane (Firman & Pullinger 1987). The kiln was pear-shaped and was 5.0m by 3.65m in extent, with internal dimensions of 4.5m by 2.7m and a central pedestal. As well as a range of flowerpots it produced pinkish yellow peg tiles; the tiles are interpreted as wasters as they were ‘distorted or with holes punched awry’ and measured 10½in by 6½in and ½in thick (Firman & Pullinger 1987, 89). The structure appears very small for an early eighteenth-century tile kiln and it is possible that the tiles were simply used as seaters, spacers or separators for the flowerpots. The distortion and faulty holes could be due to a combination of the repeated re-firing of the tiles and the deliberate selection and use of ‘seconds’ in a context where faulty holes would not matter. As the flowerpots were unglazed none of the typical distinctive traces of such use as seaters, spacers or separators would be present. The only other locally investigated production site is a possible brick yard at Shippea Hill Farm on the Isle of Ely, which is not closely dated (Cra’aster et al. 1965, 147). The remains consisted of stacked bricks and tiles, the bricks were in large regularly laid stacks 10ft (3.0m) square and were 9in by 4in and 2in thick in size. The tiles were in long rows 15ft (4.6m) long and were stacked on edge lengthways; they were 11in by 6 1/6 inch in size with two holes. There was also a possible clay pit nearby.

The loam deposits north of the river were still being exploited in the nineteenth century with three kilns and associated brick grounds in 1839; these provided employment for around 10 to 15 brickmakers and up to 20 bricklayers although the area became less significant as the century progressed (Wright 2002, 25). This decline was due to the rise of the industry in the Newmarket Road area to the south of the river, which expanded throughout the nineteenth century, with several firms in existence at any point in time, some of which employed 80 to 100 men. The clay was extracted from open-topped pits up to 80ft (24m) deep and was mixed with lime-free ‘silver’ sand brought by cart from the east coast. The loam to the north of the river which was exploited earlier would have been easier to dig and mix than the Gault Clay to the south of the river; however, the Gault Clay could produce more heterogeneous bricks.

By the end of the eighteenth century there had developed a ‘very fine-textured and regular grey-white brick of constant colour’ and this was what was generally used in the nineteenth century (RCHM(E) 1959, ci). In 1903 McKenny Hughes recorded that Cambridge bricks were made of Gault Clay, which generally burns white while Ely bricks made of Kimmeridge Clay burn red (Hughes & Hughes 1909, 113). The industry continued into the twentieth century and in the 1930s there were four companies in Cambridge, while at Ely there were ‘no less than five well-established brick-works’ (Page 1948, 367). The kilns in use until the 1940s were 30ft long (9.1m), 12ft wide (3.7m) and 14ft high (4.3m), 9ft (2.7m) of which was below ground level (Porter 1973). The kilns were built from firebricks, there were two 2ft (0.6m) square flues under the floor which was built in an openwork pattern, the roof was slightly domed and pierced with 6inch diameter holes. Wood or peat were used to dry out the kiln prior to firing, while the firing itself used coal. Firing would take around 10 days, with a further 28 to 42 days for the kiln to cool.

Wood and timber Richard Darrah, incorporating specialist information from Ian Tyers and Steve Allen

The seventeenth–nineteenth-century timber primarily consisted of nine timber baseplates that had been utilized during the construction of stone or brick-lined wells (Figs. 5.4, 5.10, 5.12, 5.24C, 5.25 and 5.29) plus timber-framing of standing buildings (Fig. 5.31). There were also a range of objects (Figs. 5.5, 5.21C, 5.43K, 5.49B and 5.50), but the only individual item of note was a seventeenth-century winding block (Well 42; Fig. 5.10; Case Study 8).

The most striking seventeenth-century evidence for timber comes from the baseplates of three stone- and stone and brick-lined wells (Wells 41–43; Figs. 5.4 and 5.10). Earlier stone-lined wells did not have timber baseplates; although such baseplates would have provided additional stability for the base of the well their main function appears to relate to the construction of the features. Until the twentieth century the traditional local method of well construction was to use a cartwheel felloe c. 5ft (1.5m) in diameter, with the hub and spokes removed (Warboys 2003, 21–2). A circuit of unmortared stone blocks or bricks would be laid on the felloe, the soil would then be carefully removed under the wheel and the weight of material would cause the wheel to sink. This process would then be repeated as often as required. The 1620s therefore represent the earliest evidence for this local tradition, which lasted for three centuries. All these timber baseplates, and indeed the eighteenth–nineteenth-century examples, vary considerably. This is largely because they represent the ad hoc use of available timber, often material that had already been used once in a different context.

The eighteenth-century timber comes also from well baseplates. Well 45 (Figs. 5.24C and 5.25) built in the 1720s was different from the seventh-century examples in that the timber appears to be boards purchased specifically for this purpose and it was constructed by nailing them together, rather than using traditional timber-framing techniques. In contrast, Well 46 built later in 1761 is more akin to the seventeenth-century tradition of idiosyncratic use of available material and did utilize traditional timber-framing techniques (see Case Study 10; Fig. 5.29).
A number of, but not all, of the nineteenth-century wells contained wooden elements, although the most spectacular Wells 49–50 are associated with the Robert Sayle department store. In contrast to most of the seventeenth–eighteenth-century well basements, the nineteenth-century basements and annuli part way up the shafts, such as in Well 56, were much less ad hoc, even though they were still often made from reused materials. They were generally much thinner than their predecessors, with the wood much more thoroughly reshaped into circles.

From the seventeenth century onwards timber basements were used in the construction of wells in the Grand Arcade street block. These were initially rather ad hoc structures where a broadly circular ring was constructed using traditional timber-framing techniques, apparently from whatever timber was readily available. Wood was widely imported into Cambridge during this period; a 1702 Act covering freight on the Cam lists deal boards, timber, faggots, billets (lengths of round timber), pales and staves for barrels (Chisholm 2003, 186). This pattern of ad hoc usage continued throughout the eighteenth century, although some basements were also constructed from boards – several of which were specifically purchased for the purpose – that were nailed together. By the nineteenth century only nailed boards were in use; these were much thinner than their predecessors and more thoroughly reshaped into circles. In addition to the basements there were also timber annuli part way up the well shafts. Wells stopped being constructed in town in the late nineteenth century due to the provision of mains water, but continued to be constructed locally in rural locations into the twentieth century where cartwheel felloes with the hub and spokes removed were employed (Warboys 2003, 21–2). There is no evidence that cartwheel felloes were ever employed in Cambridge itself, suggesting that these were either a late nineteenth–twentieth-century development or more probably that felloes that were no longer fit for their original purpose were more readily available in the countryside; an idea supported by the discovery of a wheel in a eleventh–twelfth-century pit-well at Longstanton (Patten & Evans 2005).

**Leatherwork Quita Mould**  
The majority of the seventeenth–twentieth-century leather consisted of shoes and boots; there was also a complete moulded seventeenth-century drinking vessel (Fig. 5.6B; see also Fig. 4.37B) and an upholstery fragment (Fig. 5.21A, see also Fig. 4.37C–D). In addition, a pair of early twentieth-century boots was recovered from Christ’s Lane.

Although some seventeenth-century shoes were recovered (Fig. 5.6A), the most impressive discovery was a near-complete moulded leather drinking vessel in Cesspit 16 (see Case Study 7; Fig. 5.6B, see also Fig. 4.37B). The only eighteenth-century leather came from the backfilling of Well 38 in c. 1760–80. In addition to two wide belted shoe soles and a clump repair patch, there was a sheet fragment from a piece of upholstery or other furnishing with stamped and looped decoration (Fig. 5.21A; see also Fig. 4.37C–D).

Several late nineteenth–early twentieth-century features contained leather items. Unlike in earlier periods these were not preserved by waterlogging but rather had not yet decayed. Overall, leather survived in eight features; recovered items included 20 shoes, all of well-known types of the period, and six other items. Three features had single shoes; three contained two shoes (including at least two pairs), one had four shoes (no pairs, plus a fifth shoe with an organic sole and textile upper) and one contained nine shoes (including only one pair). There were 17 features of this date containing large assemblages of other material where leather should potentially have survived. This suggests that in over half the large assemblages leather was not discarded, around a third of the time a single shoe or a pair of shoes was thrown away while a tenth contained larger groups, the largest of which was associated with the Robert Sayle department store.

**Economic and environmental data**

*Mammal and bird bone* Lorrain Higbee  
The overall animal bone assemblage has been discussed in detail in Chapter 4; only the material directly pertaining to the seventeenth–nineteenth centuries will be presented here. This assemblage was relatively modest in size, but nevertheless produced several significant groups.

The only seventeenth-century material of note comprised a group of four carefully arranged horse skulls in Pit 56 of c. 1600–30 (Fig. 5.7). In addition, ADPs 10–12 of c. 1680–1720 contained the bodies of six cows that were dairy cattle and appear to have suffered from ‘milk fever’ (Figs. 5.13–5.14).

The eighteenth–nineteenth-century animal bone, which effectively dates to c. 1760–1845, will be considered as a single group. In total 1409 bones out of 5348 (26.3 per cent) were identified, including mammal (1026), bird (379), amphibian (3) and crab (1) (Table 4.15). The bone is dominated by the principal livestock species: sheep is the most common, followed by cattle and then pig, although cattle provided the bulk of the meat (Fig. 5.99A). The cattle bone is a mixture of butchered waste and prime meat joints from domestic consumption, consisting of calves fattened for meat and very old cattle. The sheep bone includes material from butchery and domestic consumption, but there was still some material from the processing of hides. Although sheep were raised primarily for their wool, supplying lambs and prime mutton was also important. Pigs were still being raised nearby, but were being culled at a younger age due to improved, faster growing breeds. No clear pattern with regards to species frequency is apparent on sites of this period (Fig. 5.98B). Hare, rabbit and fallow deer were also consumed and cats and dogs were found, mainly as complete or partially disturbed skeletons, and there were some horse bones. Chicken was the most commonly eaten bird, with evidence of a shift in importance from eggs to meat. Goose, duck, pigeon and turkey were also eaten, plus a range of wild species.

The studied eighteenth-century material primarily consists of five relatively large assemblages dating to after c. 1760 (Well 38, PBs 10–11, Building 25, Cellar 6). Most of the bone relates to meat joints, but some butchery waste is present and there are several groups of leatherdressers’ waste. Cats and dogs were disposed of in several redundant features and it appears that pigs were still being raised in some plots. There is also the earliest evidence for the eating of turkey from Cellar 6 dated c. 1780–90. Six significant
assemblages of c. 1800–45 were studied, several of which can be contextualized through documentary evidence. They include groups associated with a grocer’s household (Soakaway 2), a school (PH 3), a College cook (Soakaway 3) and an inn (Cellar 4, Pit 63). After c. 1850 animal bone becomes extremely rare as a component in the large assemblages of material that were still being deposited (Fig. 5.94A). This phenomenon has also been noted in London and may relate to changing attitudes of what represented ‘dry and proper rubbish’, plus possibly an increased use of animal bone as agricultural fertilizer (Jeffries 2006, 286). At about the same time the quantities of oyster shell in such assemblages also declined as part of the same phenomenon. There is also evidence for consumption that would not have resulted in any bone at the site, such as a jar lid for potted game (Fig. 5.64E).

Fish bone Jen Harland
Only a few fish remains relating to this period were recovered, all of which dated to the nineteenth century.

The material included Atlantic Herring, Cod and Halibut family. There was also a dish used as a container for potted Arctic char (Fig. 5.64F), a type of salmon native to Lake Windermere and Coniston Water in the Lake District. The delicate flavour of this fish’s pink-tinged flesh has been popular as a potted breakfast dish in the Lake District since the sixteenth century and improved nineteenth-century transport links led to it becoming a delicacy across Britain.

Discussion

The period between the seventeenth century and the early twenty-first centuries is predominantly characterised by rapid and profound change in the Barnwell Gate suburb of Cambridge, albeit with considerable elements of continuity. For ease this discussion will, however, be sub-divided into the four chronological sections, with the Robert Sayle department store already having been considered (see above).

Seventeenth century

The seventeenth century comprised one of the most turbulent periods in English history and the archaeological sequence at Grand Arcade can be situated in regard to these events. In the early part of the century, for instance – c. 1600–30 – a major transformation occurred in Plots XIV–XIX: a series of brick-built structures, boundary walls and wells were created, while a group of horse skulls were also deposited. Overlapping with this, in c. 1616–37 the plot to the north (Plot XIII) stopped being used as an inn and was enclosed by walls. At the same time its cesspit was backfilled with a range of material that, although focused principally upon everyday and mundane eating and drinking, is also redolent of the Atlantic slave trade (Case Study 7). Broadly coeval with this, in c. 1625–42 the next plot to the north (Plot XI) became an inn and had its cesspit backfilled, a well created and also gained access to another well, thereby indicating that it obtained water from three separate sources.

The appearance of these brick-built structures indicates the arrival, albeit belatedly, of a form of ‘great rebuilding’ in the street block. The idea of a single ‘Great Rebuilding’ across rural England between 1570 and 1640 was first advanced by Hoskins (1953). Although broad-brush in its approach and overly narrow in its dating there is still evidence that many medieval open halls were floored over, had new

Figure 5.99. Eighteenth–nineteenth-century livestock species: (A) the relative frequency by number of specimens identified to species (NISP), minimum number of individuals (MNI) and meat weight (MW) (Note that NISP and MNI figures exclude large industrial deposits); (B) the relative frequency (by NISP) compared to other contemporary sites. For earlier frequencies see Figs. 4.66 and 4.67.
chimneys and staircases inserted and glazed windows and new furnishings introduced during this period (Platt 1994; Johnson 2010, 87–112). There are suggestions that elements of this ‘package’ were present at Grand Arcade, although there is much more substantial evidence for structures linked to a second ‘Great Rebuilding’ after the Civil War; an event that emphasized regularity and the ‘neat compact boxes’ of Restoration England. Notably, this process started up to a century earlier at the neighbouring Christ’s Lane street block (Chapter 6), suggesting that a degree of variation existed across the Barnwell Gate suburb.

It seems unlikely that households would have engaged in substantial construction works such as wells during the turmoil of the Civil War and it is therefore probable that no major features were created between 1642 and 1649. In general, archaeologically discernible impacts of the Civil War are rare in Cambridge. On the one hand, the castle’s defences were strengthened at this time (Cessford 2008) and it is likely that a hoard of gold coins discovered at nearby Pembroke College was associated with the departure of royalist fellows in 1642 (Allen 1999). There is, however, no clear trace of this period in the excavated remains at Grand Arcade or Christ’s Lane; at most, this period may be reflected by a temporary hiatus in constructional activity.

Nearby, the parish church of St Andrew the Great was rebuilt in the 1660s (Chapter 6) in an act that affirmed the orthodoxy of the Anglican Church after the restoration in 1660 and the Act of Uniformity in 1662. At the same time the Independents – who advocated local congregational control of religious and church matters, without any wider ecclesiastical or political geographical hierarchy – were particularly active in the St Andrew’s Street and Hogg Hill area (Cam 1959, 135–6). A meeting at a house in St Andrew’s Street was broken up in 1665 and the congregation escaped ‘through Mr. Blackley’s yard’, possibly the same John Blackley who was recorded as residing at Plot XIV in 1669–70. In 1672, during the short-lived indulgence of Charles II, there was a licence to hold a congregation at a meeting house on Hog Hill (Cooper 1845, 556) and in 1675 there was a meeting ‘in Robert Wilson’s house in St Andrew’s parish’; this latter may be The Vine at Christ’s Lane as this was leased by a Robert Wilson in 1667–1702 (Chapter 6). Following the Act of Toleration of 1689 Joseph Hussey preached in ‘the new meeting-house built since the liberty in 1687’ on Hog Hill in 1691 (Cam 1959, 136).

In the 1680s, Plot XVI went through another transformation that resulted in a well being backfilled after only around half a century of use, along with the no doubt irksome loss of its winding block. A range of buildings and a new well were then constructed. At around the same time or a little later a series of cattle were buried in Plot XXII. Six cows, plus three foetuses – presumably milk cattle that grazed the area and suffered from ‘milk fever’ caused by a lack of forage containing the right balance of minerals – were disposed of in pits situated at the rear of the property. Over the course of the seventeenth century the majority of the pottery in use was relatively unchanged, although Staffordshire-type slipware, tin-glazed earthenware and Westerwald stoneware had all become more common. Smoking with clay tobacco pipes was now widespread and glass bottles also occurred more frequently. Only a single wig curler was recovered, from Christ’s Lane; such items appear, admittedly at an impressionistic level, to be relatively common discoveries as stray finds at College sites, thus indicating a potential ‘town’ versus ‘gown’ distinction.

The general lack of seventeenth-century material is part of a more widespread phenomenon, in which late medieval and early post-medieval sequences of pits and other features cease c. 1600–20 and there is no significant later activity until the late eighteenth or nineteenth centuries. From 1575 onwards the ‘muck, mire, and filth’ of the town was to be disposed of at a network of five ‘common dunghills’ established around the perimeter of the town and individuals had to regularly clear the middens from their properties (Cooper 1843, 332, 335). This system may well have had a marked impact on contemporary patterns of activity and refuse disposal, leading to a late sixteenth-century decline and early seventeenth-century cessation of on-site refuse disposal. It is notable that Well 42, which was backfilled in the late seventeenth century, had relatively little refuse dumped in it. This appears to mark a transition between the twelfth–sixteenth-century wells, which often contained large quantities of material within their backfills, and the eighteenth–twentieth-century wells, which did not, potentially indicating changing ideas concerning hygiene.

With the exception of the cattle skeletons, there is almost no seventeenth-century evidence pertaining to the activities that took place within the street block; similarly, there is little indication of its relative degree of ‘suburban’ characteristics. Loggan’s 1688 map indicates that the area was less built up than most of the street blocks situated in the urban core (Fig. 5.1), and indeed neighbouring Christ’s Lane (Chapter 6); there were however some street blocks located within the circuit of the King’s Ditch that contained a similar proportion of buildings to open areas. Relatively few major seventeenth-century archaeological events were identified in the Grand Arcade Street block (two major construction episodes, the construction of four wells and a sequence of cattle burials) and an equally sparse
assemblage of material culture was recovered. This is decidedly meagre given the population of approximately 120. The dearth may be due in large part to the activity that had generated the bulk of the eleventh-sixteenth-century archaeological remains – had ceased but the creation of substantial brick-built features was not yet taking place on a major scale. The archaeological ‘record’ is largely dependent on the creation of recoverable ‘context’ and it is this that the seventeenth-century street block lacks rather than activity.

Eighteenth century
Archaeologically, the eighteenth century can be viewed as a period of expansion. Subdivision led to a slight increase in the overall number of plots within the street block. Rather more significantly, however, the level of ‘occupation’ within each individual plot also increased; marked growth occurred in the number of relatively major plot accessory buildings, for example, while many of the plot heads also expanded. These developments reflect a continuation of trends that had first begun in the 1680s with the construction of buildings in Plots IX and XVI. This pattern of expansion will have had a concomitant impact on the amount of open space that could be used for gardening/horticulture; nevertheless, such areas still accounted for a significant proportion of the street block’s footprint at the end of the century. Indeed, the archaeological visibility of gardening-related activity markedly increased during this period, with the emergence of planting beds as well as garden-specific items such as flowerpots and planting labels (see further Cessford 2014b). Whilst similar materials were present in the town centre, they appear to have been much less common, presumably because of the greater restrictions on space in an urban milieu. There is no evidence for the continued grazing of cattle at Grand Arcade after the late seventeenth–early eighteenth century, however, suggesting that a shift of some kind had taken place, although pigs were still being kept in some properties.

The increasing prevalence of brick as a construction material during the eighteenth century is particularly notable. Even excluding the newly constructed frontage buildings, the many freestanding brick-built boundary walls – which averaged around 25 to 35 courses in height, and would consequently have employed 100–200 bricks per metre – would each have required thousands of bricks to construct. This represents a considerable investment, much larger than had previously been employed in relation to boundaries, to the extent that a single wall dwarfs the entire use of brick in the street block prior to the mid-seventeenth century. It therefore appears that, as in other parts of East Anglia, Cambridge crossed the ‘brick threshold’ in the early–mid-eighteenth-century, when brick became the predominant material used for walling (Lucas 1997).

Documentary evidence indicates that many of the plots continued to be used for a mixture of domestic and business purposes throughout the eighteenth century. Inns remained common, with at least six examples present, and there was also a school. Other known occupations of residents included baker, barber, combmaker, grocer, tailor, tinplate worker and victualler. Archaeologically, few of these trades leave much if any trace and the only commercial activity that generated significant remains was leatherdressing. Most of the lessees appear to have been relatively wealthy and as well as businesses there is evidence for a significant presence of widows and spinsters. There were also individuals closely connected to the University, in particular those who married and were therefore barred from continuing their academic careers and often joined the clergy.

From c. 1760 onwards the rise of mass production, consumerism and fashion are clearly implicated in the relatively large-scale deposition of pottery and glass in discrete feature groups. The ceramics in particular predominantly represent items of globalized material culture, meaning that identical examples might well be found in any corner of the world, although a proportion remained vernacular local products that had evolved over a long period (see further Chapter 7). This was also a period of rapid change, occurring within the lifetimes of individuals such as Frances Headley (c. 1729–1805) who lived at Plot XIII. Over time the pottery Frances used would have changed out of all recognition, with Staffordshire white salt-glazed stoneware, creamware and pearlware all rising and receding in prominence. This marks the first time in the history of occupation at the site that such extensive changes had occurred within such a short period of time.

The newly emergent ceramics were primarily associated with dining and tea drinking, a fashionable practice that became widespread during this period. In common with most contemporary families, the Headley’s even possessed a few porcelain vessels that had been imported from distant China. More mundane pots were still produced in local glazed red earthenware, although similar forms of Nottinghamshire/Derbyshire-type stoneware and Sunderland-type earthenware vessels could also be purchased that were manufactured much further afield. In addition, coarser unglazed flowerpots were available, vessels that were almost unknown a century previously, as well as lead planting labels for those with a serious interest in horticulture. The appearance of such items
is somewhat paradoxical given that large areas of the plot tails were built upon during this period, thereby reducing the size of most gardens. Changes in the types of glassware that were in use were if anything even more marked than those of the ceramics, with a wide range of bottles and drinking vessels appearing, particularly wine glasses. Clay tobacco pipes also greatly increased in frequency.

During the eighteenth century almost all the plots had become shops and there was little if any connection left to the older artisanal trades and agricultural practices that had sustained the inhabitants in preceding centuries. The area was becoming significantly more urban in character. The grocery business that Frances Headly inherited would have stocked a range of luxury items imported from around the globe, such as coffee, cocoa, sugar, spices and dried fruit. Whilst long-distance trade in foodstuffs is archaeologically identifiable from the sixteenth–seventeenth centuries – in the form of wine, cod and grains-of-paradise – the eighteenth-century trade was on an altogether larger scale. The most significant of these new products would have been tea, which first appeared in Britain in the 1650s and from the 1660s was imported as a medicinal product. By the 1690s it was consumed as a beverage, albeit on a restricted scale, but by the 1750s its popularity had risen meteorically; it became the national drink and its consumption far outstripped that of coffee, which had preceded it.

By c. 1760, when the earliest feature groups were deposited at the site, vessels linked to tea drinking comprised a prominent component of the assemblages (42 VSA) compared to those associated with coffee (four VSA). Indeed, although several of the studied assemblages predate the Commutation Act of 1784, which reduced the tax on tea from 119 per cent to 12.5 per cent, there is nothing in the composition of these groups to indicate that this had an impact on the overall levels of tea consumption.

Nineteenth century

Over the course of the nineteenth century, the number of buildings present within the street block doubled and in certain plots quadrupled or more. The plot dominant frontage buildings were now almost entirely two or three storeys tall, with additional attics and basements and tiled or slated roofs. By the end of the century many of the plot accessory buildings to their rear were also of similar construction, although these structures typically lacked basements. This marks a significant change, as the majority of the early to mid-nineteenth century plot accessory buildings had comprised timber-built structures, some of which had thatched rather than tiled roofs. A further change during the first half of the century pertained to the location of wells. For centuries previously, such features had almost exclusively been located externally within the plot tails. Now, however, the majority were located internally; either at the rear of the plot dominant buildings themselves or else in ancillary structures situated close by. Nevertheless, during the second half of the century, some – although by no means all – of these wells went out of use as piped mains water was introduced.

The expansion in building coverage meant that substantial open spaces and gardens were now a rarity in many plots, although yards still comprised a significant component of most residences. New plots were also created via a process of subdivision. Often occupying the rear of former plot tails, these new additions primarily consisted of densely packed slum-type ‘court’ developments comprising two rows of buildings that were accessed by a narrow lane. In the Grand Arcade street block examples of this phenomenon include St Andrew’s Court (1830s, six additional plots), Corn Exchange Court (1840s, nine additional plots), Blue Lion Court (1840s, eight additional plots) Post Office Terrace (1850s, four additional plots) and St Andrew’s Hill (1830s–50s, eight additional plots). The only opposing development was the emergence of the Robert Sayle department store, which led to the loss of some plots (1850s–70s, four plots). A very similar pattern of court development also occurred within the Christ’s Lane street block (Chapter 6).

After the 1850s no new ‘horizontal’ plots were created, although it could be argued that the sub-divided usage of many of the frontage buildings – where, between 1870 and 1900, it was common for the upper storeys of the structures to be given over to different business or residential purposes than their ground floors – effectively created c. 30–40 new ‘vertical’ plots. To define these new entities as discrete plots would, however, be questionable, since they lack the necessary degree of individuation. A total of 64 households were recorded in the 1881 census of the Grand Arcade street block, plus five uninhabited plots. Overall, there were 351 inhabitants. The mean household size was 5.5, although a more realistic value (excluding the Robert Sayle department store) was 4.6. This may well have represented the high water mark in terms of the population of the area, which subsequently declined gradually throughout the twentieth century, and represented a c. 270 per cent increase since the late eighteenth century. It is notable that the distribution of the households recorded in 1881 was particularly varied, with a marked admixture of the identifiably ‘rich’ and ‘poor’ and a similar pattern was also identified at Christ’s Lane (Chapter 6).
Despite the rapid escalation in the street block’s overall population, the area nevertheless became increasingly commercial in character during the nineteenth century, although most plots retained a significant domestic component. By the end of the century, the inhabitants of a given plot and the individuals that utilized it for commercial purposes were frequently different, with the business owners typically residing elsewhere within Cambridge’s newly established outlying suburbs. Such changes were part of a much broader pattern, whereby an increasingly clear demarcation developed between work and life; this was characterized by a transition from the natural rhythms of ‘task time’ to the commercial currency of ‘clock time’ (Thompson 1993). Commensurate with these developments, archaeological evidence for the emergent ideologies of personal discipline, hygiene and cleanliness (Schackel 1993) and domesticity and gentility (Fitts 1999) was identified; this is reflected by the increasing prevalence of toothbrushes, chamber pots, sets of matching ceramics and even the selection of ‘dry and proper rubbish’ as backfilling material (Jeffries 2006).

Perhaps the most successful business in the street block, with the notable exception of the Robert Sayle department store, was that of the Barrett family of pottery retailers (Plot XVII). College servants also became much more visible both documentarily and archaeologically; particularly relatively senior servants such as the cook Thomas Wicks (Case Study 12) and the butler Burbage, who between them left a legacy of fine Wedgwood and Turner ceramics, collegiate wine bottles and a Martaban-type jar that provide a link to the University. Much less visible are the lower level of servants, such as bedmakers, who lived in the densely packed court-type developments. There were also a significant number of students lodging in the street block (Holbrook 2006), although a lack of assemblages of the correct date from appropriate plots means that they are not discernible archaeologically.

Although the Martaban-type jar from Cellar 12 provides the most striking evidence for long-distance trade, the most ubiquitous was that associated with tea drinking, continuing the phenomenon first noted in the eighteenth century (above). Tea drinking vessels continued at broadly the same level in the first half of the nineteenth century, but increased in frequency after c. 1850 (Chapter 7); indeed, from the 1820s onwards the grocers at Plot XIII were regularly described as a tea dealers. New attitudes to hygiene are demonstrated by the increasing appearance of toothbrushes and the eventual disappearance of chamber pots, plus the arrival of a Turkish Baths (Plot XVII). The character of pottery had been revolutionized by the advent of colour transfer-printing, which dominated the market, while bone china and Utilitarian English stoneware had also risen to prominence. At the lower end of the pottery spectrum, production ended at Ely after around eight centuries, with even large heavy vessels being replaced by Sunderland-type earthenware produced much further afield. Glass vessels became ubiquitous, while almost all the brick and tile in use was supplied by local production in Cambridge.

In addition to buildings, which provide perhaps the most concrete evidence of the street block’s urban character during this period, several strands of material evidence can also be adduced. The raising of pigs within certain plots continued into the nineteenth century, for example, but is last represented in a deposit of c. 1822–34 (PH 3); moreover, the practice is only evinced in one out of seven large bone assemblages of c. 1800–50, whereas it was evident in two out of three late eighteenth-century groups. The diminution in this activity was almost certainly associated with the gradual shrinkage of open garden areas during this period. Similarly, the discarding of gardening-related material c. 1800–20 in PBs 7–8 and c. 1840–60 in Well 37 probably resulted from the same process. Leatherdressing, a long-lived activity at the site, also appears to have come to an end in the nineteenth century; the last waste material associated with this industry was deposited c. 1840–60 in Well 41. Although no longer suburban, the street block nevertheless retained a number of plots that were much larger than those situated in the urban core. This situation presented a number of opportunities, most notably for the development of the Robert Sayle department store as a large-scale institution.

Archaeologically, the nineteenth century comprises the densest and most richly textured of all the periods investigated at Grand Arcade, yet beyond the broad sweeping narrative of increasing occupation it is also amongst the most fragmented. Particular highlights in broadly chronological order include the assemblages associated with the household of College cook Thomas Wicks (c. 1808–25, Soakaway 3, Plot XV; Case Study 12), Sarah Dobson’s school (c. 1822–34, PH 3 etc., Plot XIV; see also Cessford 2018a) and the Cock Inn (c. 1830–45, Cellar 4 etc., Plot XXII; see also Cessford 2014a) plus a purpose-built grocer’s warehouse and kitchen of 1845 (Standing Building 70, Plot XIII). Later in the century, material linked to the Newby household was encountered (c. 1855–8, Well 37, Plot X), plus a purpose-built photographic studio (c. 1867–9, Standing Building 72, Plot X) and some assemblages and purpose-built storage/retail space associated with the Barrett family of ceramics.
retailers (c. 1879–82, Building 49; c. 1882–5, Cellar 12 and Standing Buildings 94–6; c. 1882–1900, Building 51, Plot XVII). This list excludes material associated with the Robert Sayle department store.

Twentieth century
Overall, the twentieth-century archaeological remains encountered at Grand Arcade were not particularly impressive. Indeed, it could be argued that they contribute little to the generic narrative of an increasingly commercial focus within the street block; the commensurate decline is in effect, the triumph of ‘disposability and dispossession’ (see Lucas 2002). In certain instances, however – as in the case of Plot XIII – this broader story can be resolved into closer focus. One particular change stands out above all others during this period. Beginning in the mid–late nineteenth century, but escalating markedly during the twentieth century, the nature of households that formed the Grand Arcade street block radically altered. Prior to this, individual households had comprised locales wherein a combination of domestic, business and industrial activities took place. Over time this pattern fragmented and the different spheres became physically separated, so that those who worked and lived in a particular property were no longer the same individuals. This effectively transformed the street block and its constituent properties into ‘non-places’, which were not relational, historical or concerned with the establishment of a sense of identity and that were so transient that they do not hold enough significance to be regarded as ‘places’ (Augé 1995).
Medieval to modern suburban material culture and sequence at Grand Arcade, Cambridge

This is the first volume describing the results of the CAUs excavations in Cambridge and it is also the first monograph ever published on the archaeology of the town. At 1.5 hectares the Grand Arcade investigations represent the largest archaeological excavation ever undertaken in Cambridge, significantly enhanced by detailed standing building recording and documentary research. It includes one of the most comprehensive studies of the suburb of a British town, with fourteen investigated plots of the mid/late eleventh to twentieth centuries, and the most detailed investigation of a British town ditch ever undertaken, spanning the early/mid-twelfth to eighteenth centuries. Major artefactual assemblages of many material types were recovered, with extensive waterlogged preservation of wood and leather plus environmental sampling, including pollen and insects. The volume treats the copious eighteenth-twentieth-century material culture in a manner unparalleled in a British context, including a considerable number of college related items that attest to the town’s distinctive role as a university centre.

This is an important book, and the scale of the investigations and the richness of the archaeology make it a major contribution to studies of British town suburbs and boundaries in particular and urban archaeology more generally. The ground-breaking commitment to the archaeology of the eighteenth-twentieth centuries is particularly important, as Cambridge was one of the key intellectual hubs of the foremost global power for much of the period.

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