

## **The excavation of a Romano-British trackway and a post-medieval tannery at Spa Road, Bermondsey**

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*Excavations undertaken by AOC Archaeology Group in 2008 at 112–122 Spa Road, Bermondsey, London Borough of Southwark revealed evidence for activity from the Romano-British, post-medieval and modern periods. The earliest activity was represented by an unmetalled Romano-British trackway with two phases of use. After a hiatus in activity of over 1000 years, activity was re-established in the 17th and 18th centuries with a system of ditches demarcating fields for the purposes of market gardening. Limited quarrying and waste disposal was also taking place at this time. In the 19th century the site was occupied by a tanner's yard; approximately 80% of the tannery complex was present within the limits of the excavations, formed of multiple buildings, groups of tanning pits and a comprehensive drainage system. The scale and preservation of the tannery features, in combination with a number of cartographic and documentary sources associated with the tannery, allowed in-depth interpretations of the layout and development of the tannery to be considered. Contemporary with the tannery were the remains of numerous refuse pits located to the rear of domestic properties to the north-west corner of the site. The final phase of activity is represented by the limited remains of the Salvation Army City Colony, which was in use throughout the 20th century.*

### **Introduction**

#### **SITE LOCATION**

Between August and September 2008 AOC Archaeology Group undertook large-scale excavations at 112–122 Spa Road, Bermondsey, in the London Borough of Southwark (TQ 3399 7916; fig 1). The excavation followed a 22-trench evaluation in 2007. The archaeological investigation was commissioned by Bellway Homes Ltd – South East Division ahead of residential redevelopment. The programme of archaeological works was assigned site code SRQ07.

The aim of this article is to present the synthesised results of the excavation, by period, the full archive being available from the London Archaeological Archive and Resource Centre (LAARC).

#### **GEOLOGY AND TOPOGRAPHY**

The underlying geology consists of Kempton Park Gravels, overlain by alluvial flood deposits (BGS 1994). The site lies in the Lower Thames Valley flood plain, with the topography of Bermondsey being generally flat and low-lying.

### **Archaeological and historical background**

#### **PREHISTORIC**

Recent studies have recognised that the prehistoric landscape of modern Bermondsey consisted of a series of small sand islands (eyots) formed by meandering stream channels eroding the Pleistocene flood plain gravels. The eyots would have been separated by river channels, marshland and mudflats formed during the early Holocene period (Sidell *et al* 2002). The site would have been located on the Bermondsey eyot, the largest of the islands located on the south bank of the river Thames.

A scatter of prehistoric features and finds ranging from Mesolithic flints to Late Iron Age pits and ditches discovered in the Bermondsey area, is thought to represent intermittent

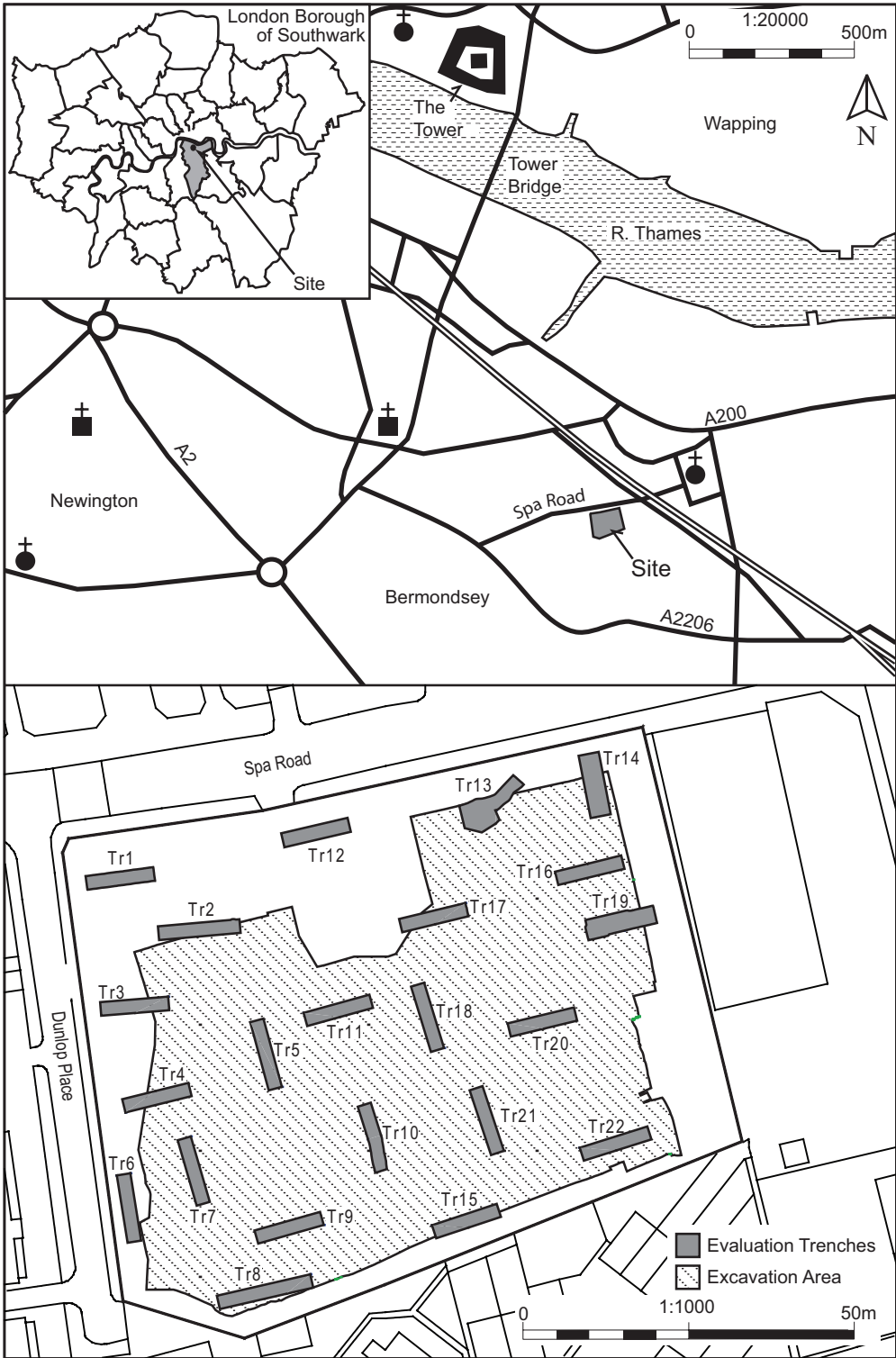


Fig 1 Spa Road, Bermondsey. Site location. (© Crown copyright Ordnance Survey. All rights reserved)

settlement and activity occurring throughout this period. It is likely that over the course of prehistory the environment around Bermondsey was susceptible to periodic flooding and inundation (Leary 2004).

#### ROMANO-BRITISH

The area of Bermondsey in which the site is located was previously within the rural hinterland of the Roman settlement at Southwark that existed from the mid-1st century to the 4th century (Cowan *et al* 2009).

The discovery of features dating to the Romano-British period in the vicinity of Spa Road is limited, although evidence for field boundaries and possible animal enclosures associated with this period was found during excavations at Bermondsey Abbey and Grange Road to the west and south-west (*ibid*). A short distance to the south of the site, archaeological work uncovered two inhumations believed to date to the 4th century (*ibid*). Otherwise, evidence of Romano-British occupation, at this distance from the core Southwark settlement, is rare. Taking into account the available evidence, it is likely that this area of the Bermondsey eyot was firmly within the rural hinterland of Southwark, with agriculture being the primary activity.

#### POST-MEDIEVAL

The rural character of the immediate area is likely to have persisted during the Anglo-Saxon and medieval periods through into the 18th century, as the first detailed cartographic depiction of the area by Rocque in 1746 indicates that the site and the surrounding area consisted predominantly of open agricultural fields (fig 2). The narrow linear divisions within each field suggests that market gardening was taking place. Early maps identify the northern boundary of the site bordering onto a substantial road – Rope Makers Walk – that later became Spa Road when Thomas Keyse built his original spa and tea gardens in 1770 (Reilly 1998). Later cartographic sources indicate the site continued in agricultural use until the late 1810s.

The original construction date for the W Powell and Sons tannery complex found on the site could not be identified from contemporary documents, although a review of the Poor Rate books for the parish of St Mary Magdalene identified that Active Place, the short length of road leading from Spa Road providing access to the tannery complex, was first cited in 1821. This, in combination with a William Powell known to have been living in the



Fig 2 Spa Road, Bermondsey. Outline of the site superimposed on Rocque's map of 1746.

adjacent street of Amelia Row by 1825, strongly indicates that the tannery complex itself, and the domestic properties adjacent to it, were originally constructed at some point in the first half of the 1820s. The 1833–6 Valuation Plans for St Mary Bermondsey provide the first evidence for the layout of the W Powell and Sons tannery. The tannery is identified as consisting of five distinct groups of buildings and two groups of pits, in addition to the domestic structures fronting onto Active Place and Spa Road, including the Crown public house, all of which fall within the site boundary (fig 3). At this point in the 1830s, the tannery complex would have been firmly located within the ever-growing urban sprawl of South London, with the population of Bermondsey close to 74,000. This urban sprawl, consisting mostly of tightly packed low-grade terraced housing, brought with it high levels of poverty (Reilly 1998).

The identification of sales documents and a Goad Insurance Plan dating to 1887 (fig 4) relating to the layout of the tannery, provides a high level of detail in identifying the different elements that made up the tannery, and the processes that took place therein. The Goad Insurance Plan also indicates that Powell and Sons owned the neighbouring Rouel Tannery on the adjacent Rouel Road. The tannery itself appears to have been in use for *c*90 years, with its final listing in the Post Office Street Directory in 1892. The tannery buildings, with very little change, are still shown on the 1894–6 OS map, but unnamed as such, and may have been disused by that date.

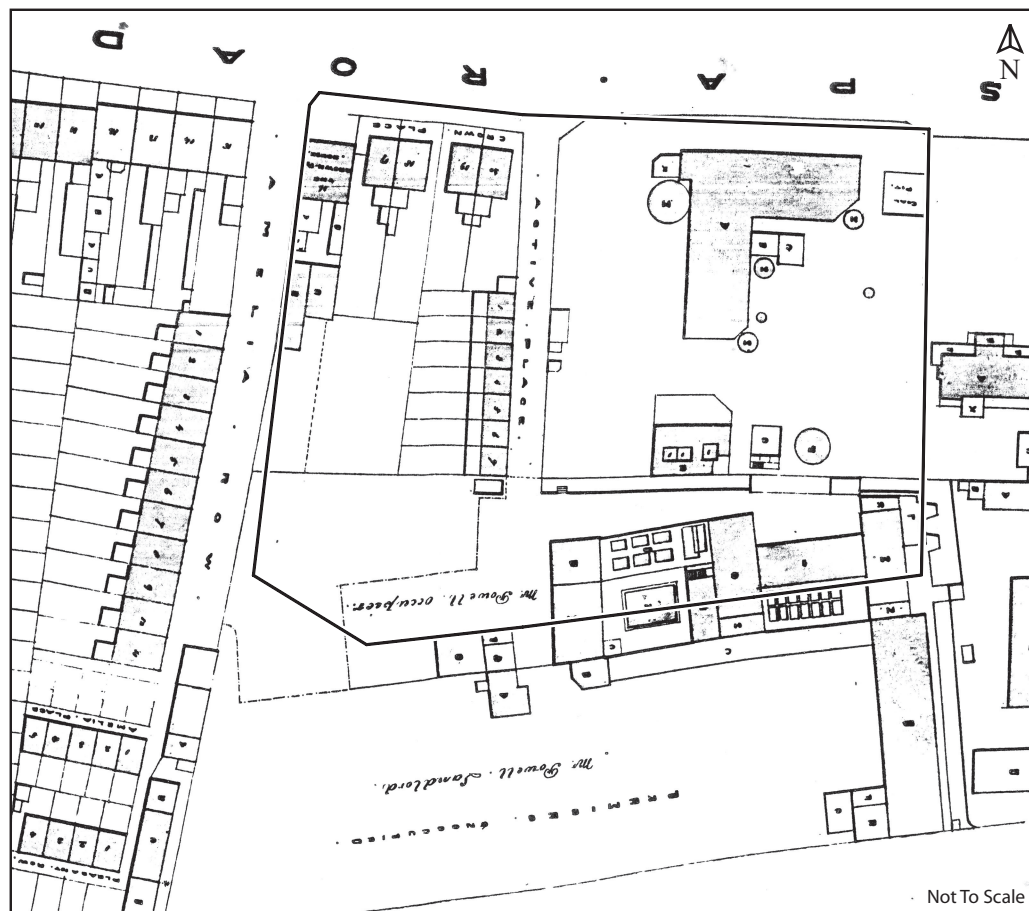


Fig 3 Spa Road, Bermondsey. Approximate site outline superimposed on the St Mary Bermondsey Valuation Plan, 1833–6. (Southwark Local Studies Library ref: Reserve Oversize 912 ST.MM)





28). A mid-19th century source described Bermondsey as 'the principal seat of the leather-manufacture in England' (Dodds 1843, 161).

There are five key reasons for Bermondsey's dominance of the tanning industry in England. The first was the access to a ready supply of animal skins, with a domestic supply deriving from the butchers of London and later from skins imported via the Port of London. Secondly, a reliable supply of water from tidal streams and ditches supplied by the Thames. Thirdly, local supplies of oak bark for the tanning process, which would have originally derived from the forests of Surrey, but by the 19th century, were sourced from further afield. The City and Port of London provided the final key elements required, in the form a ready source of skilled labour and also a significant market for domestic consumption and export (Boast 1998, 11).

The speed at which the late post-medieval tanning industry developed was rapid; Rocque's map of 1746 depicts the presence of the large Grange tannery complex (later to become known as the Barrow, Hepburn and Gale Tannery), a short distance to the west of the site, and at least eight other tanners' yards on Long Lane. By 1795 the Bevington and Sons Neckinger Mill was built on Abbey Street and soon became the largest tanning operation in the area (Bevington 1993). In the next five years the number of tanners' yards on Long Lane had increased to eleven, with further yards now located on the northern end of Parkers Row (*ibid.*, 29). When W Powell and Sons established their tanner's yard in the 1820s, they were just one part of an already very substantial industry.

The 19th century industrial growth fuelled by the growing British Empire was mirrored in the Bermondsey tanning industry, facilitated by the cheaper access to new materials such as sealskins from the Arctic and goatskins from Morocco, and expansion in export markets (Bardens 1948; Bevington 1993). By the second half of the 19th century, there was significant investment by tanners' yards in manufacturing technology, leading to mass production and significant levels of competition by the early 20th century (Bevington 1993). Leather production continued through the war years, although some yards underwent substantial damage following aerial bombardment in the early 1940s, with the last Bermondsey tanner's yard closing down during the 1980s (Boast 1998, 12).

## The archaeological sequence

Four different periods of activity (Romano-British, post-Roman to medieval, post-medieval, and modern) were identified at Spa Road. There were multiple phases of activity within the post-medieval period.

### THE NATURAL DEPOSITS

The natural deposit consisted of a friable, yellowish or orange/brown gravelly sand, with the natural sand becoming siltier in the north-east of the site. The average height of the natural sand was 1.40m OD, with the highest point in the south-west area of the site at a 1.71m OD, sloping down to the lowest point at 1.11m OD in the north-east area.

### PERIOD 1: THE ROMANO-BRITISH FEATURES (AD 43–410) (fig 5)

The earliest recorded activity on site was associated with the Romano-British period. Apart from the recovery of several residual undiagnostic flint flakes, there was no evidence for earlier prehistoric activity. The Romano-British features identified consisted of four extensive linear ditches.

The four parallel ditch features (ditches 1–4) cut into the natural sand and were orientated north-east to south-west (fig 5). The ditches were uniform in character, being generally wide and shallow (fig 6). The four ditches varied in width between 0.50 and 1.70m, and reached a maximum depth of 0.50m. Ditch 2 had apparently been recut at one stage along its northern length.

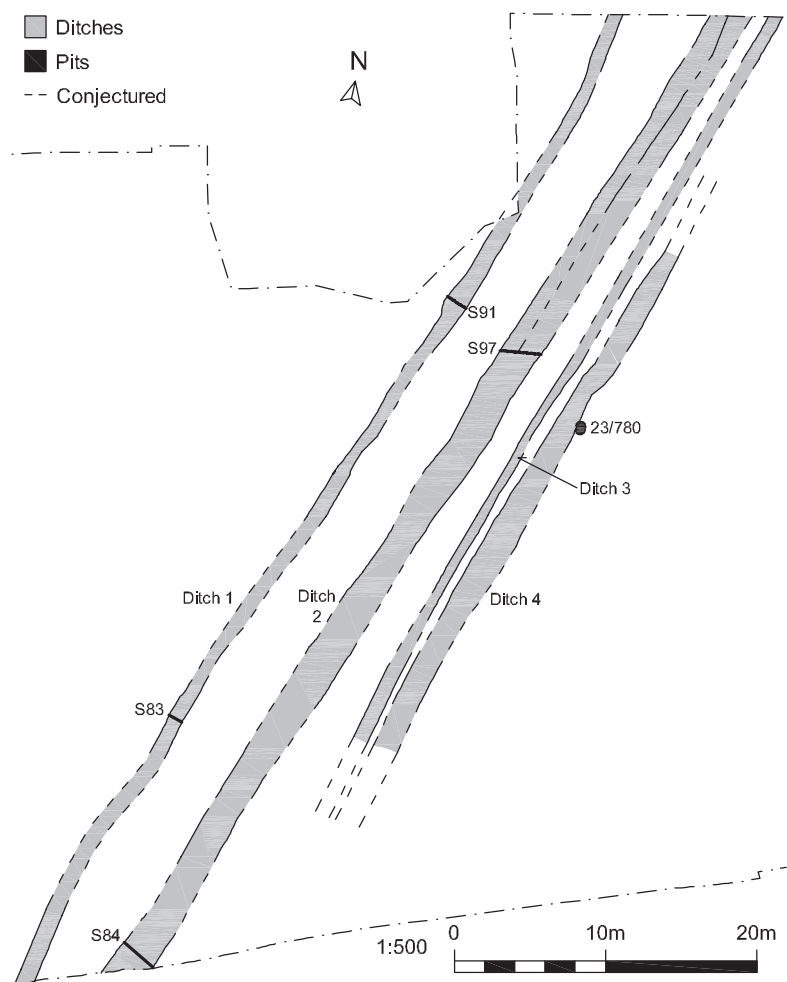


Fig 5 Spa Road, Bermondsey. Period 1: Romano-British features.

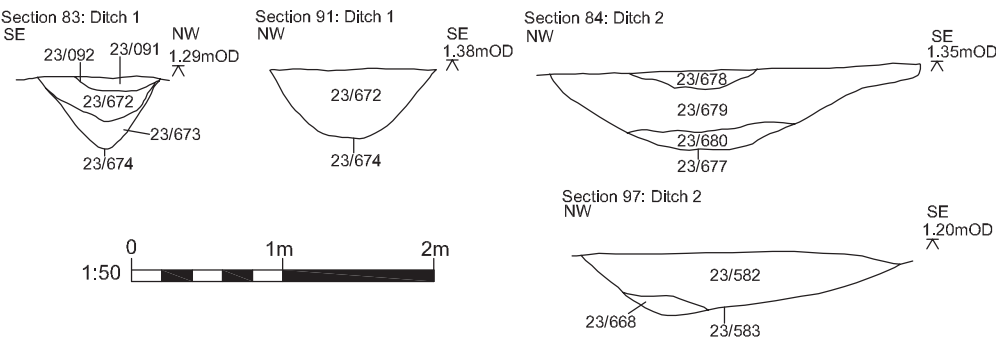


Fig 6 Spa Road, Bermondsey. Period 1: Romano-British ditch sections.

The fills of the ditches contained a limited finds assemblage, restricted to several sherds of abraded undiagnostic Romano-British pottery, fragments of ceramic building material (CBM), and degraded fragments of animal bone. One fragment of CBM was identified as part of a box-flue tile with combed keying and remains of a square vent (fig 7). Owing to the lack of detailed dating evidence, it is not possible to attribute a phased sequence to the four ditches. Since the four ditches run parallel to each other, it is likely that they represent two pairs of drainage ditches for two phases of trackway. The size of ditches 1 and 3 suggest they form the boundary of one trackway approximately 8.5m wide, with the larger ditches 2 and 4 representing another phase of trackway half as wide.

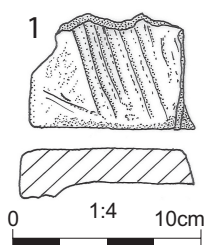


Fig 7 Spa Road, Bermondsey. Romano-British box-flue tile from ditch 4, fill 23/669. Fabric MoL 2452.

The only other feature associated with the ditches at this time was a small isolated posthole (23/780) heavily truncated by ditch 4 (fig 5).

The Period 1 features can only be assigned to the Romano-British period in general owing to the restricted nature of the dating evidence available, although the abraded nature of the pottery recovered must lead to the consideration that the sherds are residual, deriving from plough soil, suggesting the features may be late Romano-British or post-Roman in date. A small quantity of contemporary residual pottery and CBM was recovered from later features supporting the interpretation that Romano-British activity was taking place in the area.

#### PERIOD 2: THE POST-ROMANO-BRITISH TO EARLY POST-MEDIEVAL HORIZONS (AD 410–16TH CENTURY) (not illustrated)

The period post-dating the Roman-British activity on the site, through to the middle of the post-medieval period, is represented by the presence of an alluvial deposit sealing all earlier features. The silty clay deposit extended across much of the southern and central areas of the site, varying in depth between 0.25 and 0.40m, at 0.89 to 1.47m OD.

A small number of finds were collected from this layer including residual Romano-British pottery and CBM, in addition to small sherds of 13th–15th century pottery.

#### PERIOD 3A: THE POST-MEDIEVAL PRE-TANNERY FEATURES (17TH–18TH CENTURIES) (fig 8)

After a substantial hiatus in activity on site, the next sequence of features identified relates to post-medieval activity pre-dating the later tannery complex. These features primarily consisted of multiple ditches and pits located across the entire area of the site, in addition to a small number of masonry elements associated with a structure.

A series of north–south and east–west aligned ditches was observed during this phase of activity cutting into the earlier alluvial horizon, all of which were heavily truncated by later post-medieval or modern activity. The north–south ditches (5, 6 and 8–11) were located at varying intervals between 10 and 17m, with the exception of ditches 6 and 9, which were separated by only 1m (fig 8). Ditches 6 and 9 were also the best preserved, both measuring c50m in length. All six ditches were of similar character, measuring up to 1m wide and 0.30m deep, with a concave profile.

Three ditches (7, 12 and 13) in the southern area of the site were on an east–west orientation. These ditches were similar in size and character to the north–south orientated

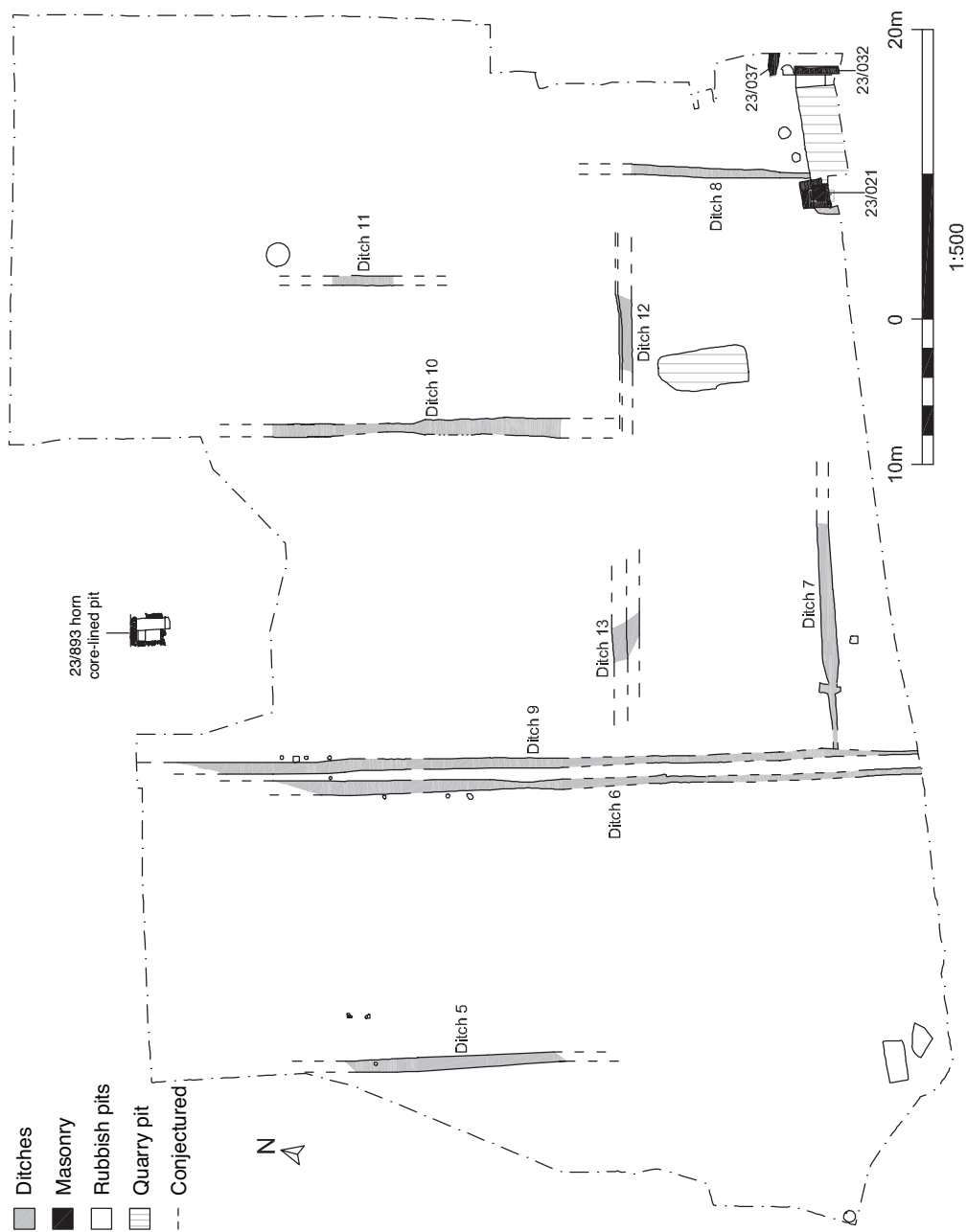


Fig 8 Spa Road, Bermondsey, Period 3A: pre-tannery features.



ditches and are thought to be contemporary, since ditch 7 appeared to join at a right-angle to the southern part of ditch 9. The regular character, size and alignment of these ditches strongly suggest they were part of the same system of field boundaries.

The finds collected from the ditches consisted primarily of groups of small highly abraded pottery sherds dating to the 17th to mid-18th centuries, although one or two sherds of mid-16th century date were also recovered. A variety of fabrics was recorded including redwares, Borderware, tin-glazed wares, as well as non-local fabrics represented by sherds of slipware, Frechen stonewares and Chinese porcelain. The assemblage from this phase strongly suggests the importation of waste from nearby urban areas for the manuring of cultivated land, supporting the interpretation of a 17th–18th century field system in this area. A limited number of diagnostic clay pipe bowls, one of which depicts a moulded bust of Nelson (fig 13, no 3), were also collected. Analysis of environmental samples taken from these ditches indicated that they contained low levels of charcoal thought to be of industrial origin, derived from a variety of species including oak, beech and ash.

A group of fourteen postholes of various sizes was located adjacent to, and respected, the alignment of ditches 6 and 9, and may represent the presence of fence lines once associated with the 17th–18th century field system.

Multiple individual cut features were also identified. The most notable of these were two large quarry pits – both c6m long, 2.5m wide and 1m deep, located in the south-east corner of the site – one of which truncated the southern extent of ditch 8 (fig 8). Each contained a series of organic fills, suggesting both pits had been left open with the backfill accumulating gradually over time. It is likely the pits were originally excavated to extract the natural sandy deposits.

In addition to these features, a total of nine rubbish pits of various size and character were recorded on the site, all of which were widely distributed. A limited assemblage of 17th or early 18th century pottery, CBM, clay pipe and glass was retrieved from the fills.

Most notable among these features was pit 23/893 measuring 2.6m square x 0.40m deep, which was lined with discarded horn cores within a clay packing (fig 8). The backfill of the pit contained large quantities of domestic waste, consisting of animal bone, CBM and moderately-sized sherds of pottery. The types of sherd encountered included white salt-glazed stonewares, late tin-glazed wares, red Borderware, and pearlware, dating the assemblage to between 1770 and 1800.

The only evidence for any structures present during this phase of activity was a short length of red brick wall (23/032) and a sunken feature (23/021) partially constructed using red and yellow stock bricks and stone blocks, both of which truncated the large quarry pit in the south-east corner of the site. These two features appear to be the partial remains of a cellar. Brick drain 23/037 is also thought to have once been associated with this structure.

#### PERIOD 3B: THE POST-MEDIEVAL TANNERY AND DOMESTIC FEATURES (19TH CENTURY) (fig 9)

##### *The tannery buildings*

(Note: all the ceramic fabric types mentioned in the text are represented in the fabric reference collection, which is available for consultation in the LAARC)

Period 3B represents the extensive remains of the 19th century Powell & Sons tannery known from historical sources. The remains of the tannery were well preserved, consisting of an extensive range of structures in the eastern half of the site and four groups of tanning pits in the south-west corner and adjacent to the eastern boundary (fig 9). The vast majority of the structures were constructed using the same materials – specifically a deep reddish purple brick identified as local (Museum of London fabric types 3032 and 3034). A number of makers' marks were observed, including 'G W', 'GREEN & BROUGH', and 'E & M' (fig 10). A range of pits located in the north-west corner of the site provides evidence for domestic activity related to the houses fronting onto Spa Road and Active Place.

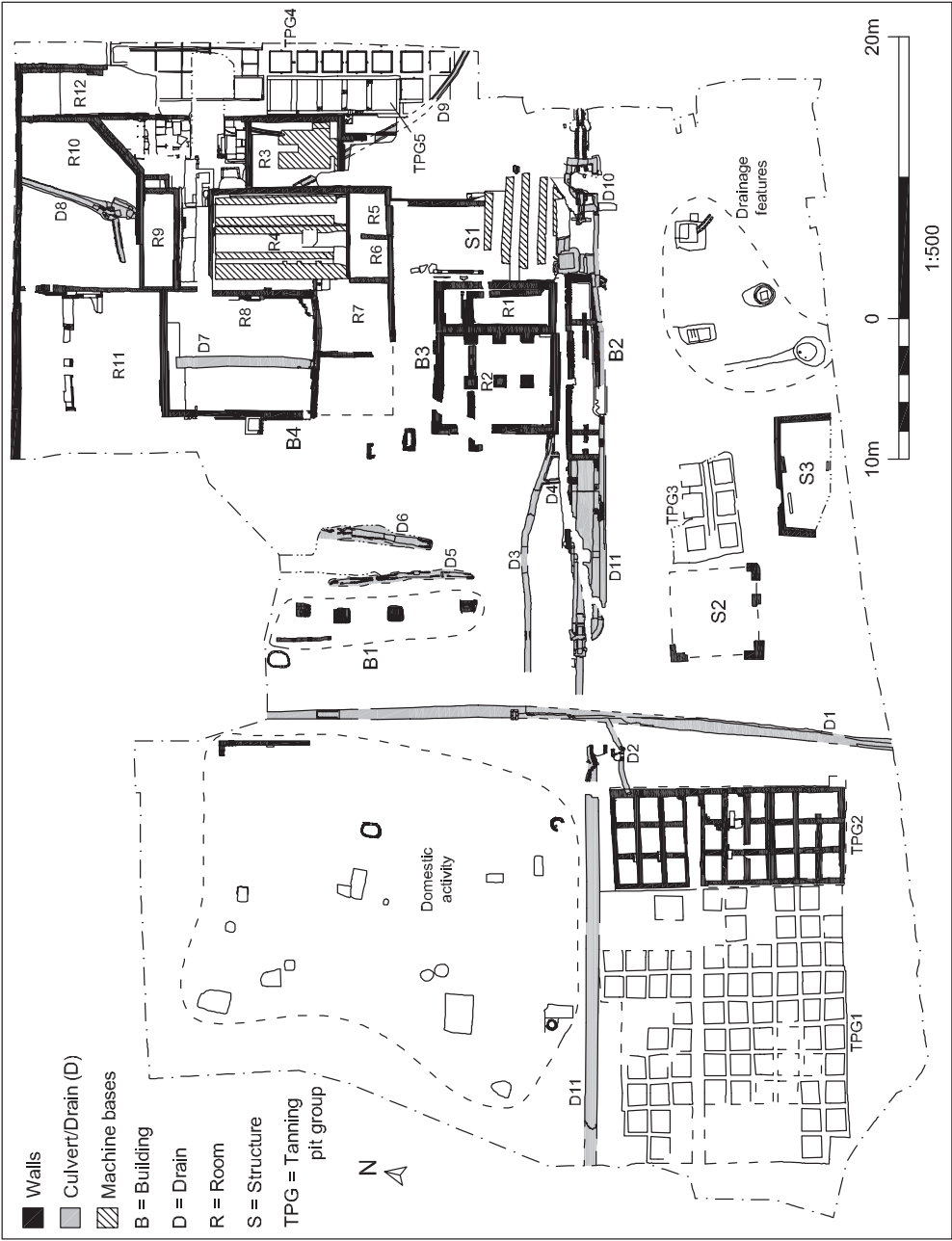


Fig 9 Spa Road, Bermondsey, Period 3B: tannery features.

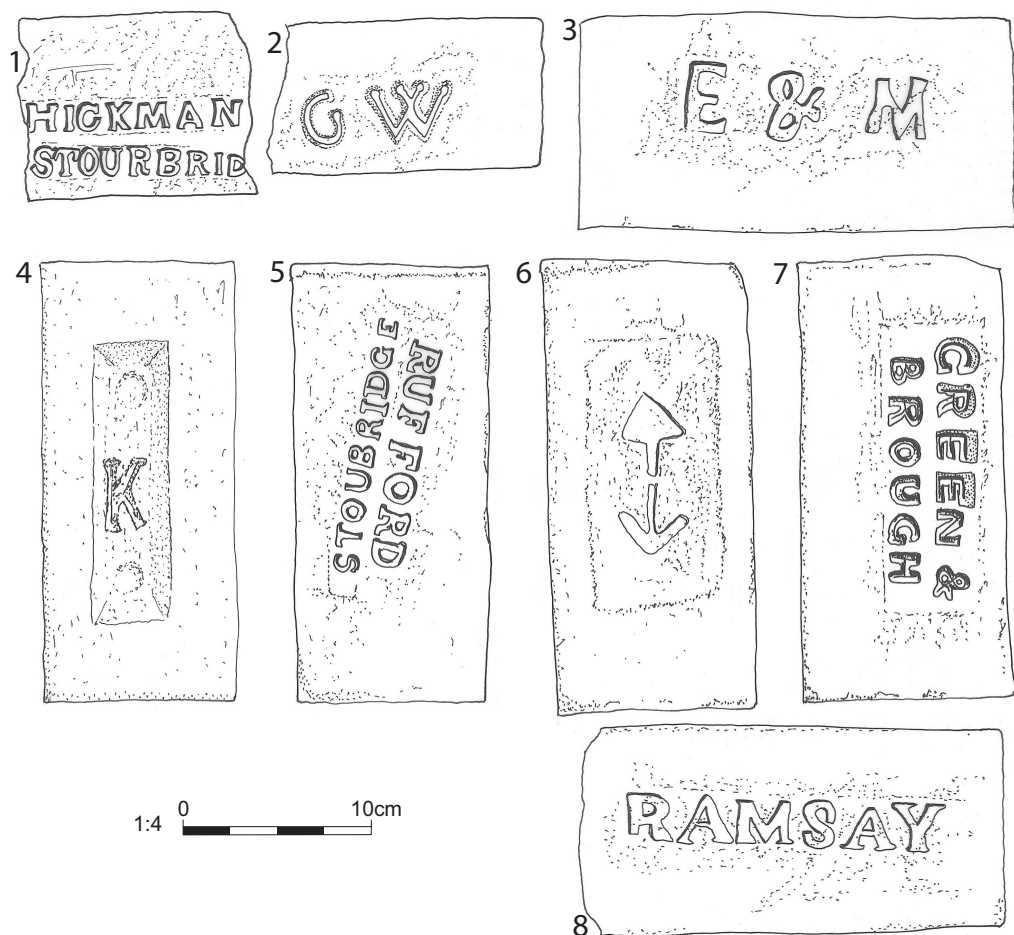


Fig 10 Spa Road, Bermondsey. Post-medieval ceramic building material makers' marks. 1) Fire brick; chamber 23/211; fill 23/210. 2) Brick fabric 3032; wall 23/758. 3) Fire brick; Structure 23/791. 4) Brick fabric 3032; culvert 23/122.5. 5) Fire brick; floor 23/703.6. 6) Brick fabric 3035; floor 23/703. 7) Fire brick; Structure 23/791. 8) Fire brick; floor 23/703.

Building 1, located in the central area, consisted primarily of a central line of four red brick stepped pillar bases set on foundations of coarse concrete, which measured in total 13m north–south (fig 9). To the north-west of the pillar bases were the remains of a short stretch of wall 0.50m wide and constructed from the same materials, thought to be part of the external wall of the building. Iron staining recorded on the upper surface of all four pillar bases suggest that metal posts were used as internal supports.

Building 2 was located to the south-east of Building 1. The layout of Building 2 was rectangular, consisting of a series of four basements measuring 13.15m in length and 2m in width. All three basement rooms contained floors constructed from soft-fired red bricks bonded by a sandy mortar. Evidence for machinery having once been located in these rooms was demonstrated by the presence of a 3m length of a low supporting wall aligned down the centre of Building 2, and several slots cut into the brick floor and truncating the internal walls to allow the slots to continue through the length of the building.

Located to the north of Building 2 was a much larger structure, Building 3, which appeared to have originally consisted of a rectangular structure  $\approx 9.5\text{m}$  in length x  $5.5\text{m}$  wide. The walls were constructed from red and yellow stock bricks and were up to 0.75m wide. This earlier

structure was subsequently demolished and replaced by a building consisting of two rooms. Building 3 was a phased construction. Room 1 was built first out of yellow stock bricks with walls 0.50m wide, measuring a total size of 9.2m in length x 3.80m wide. Room 2 was a later addition, utilising walls of a similar thickness as room 1 constructed of red brick and bonded into the western face of room 1. The addition of room 2 increased the length of Building 3 to 10m. Associated with room 2 were three central stepped brick pillar bases, 0.8m square, which were paired with three further stepped brick bases built into the western wall of room 1.

To the east of Building 3 was a contemporary brick-built feature, Structure 1, which was made up of a series of five east–west-orientated walls. Structure 1 was symmetrical in plan; the central wall was the longest at 6.75m, with the remaining walls gradually decreasing in length to 4m. Each wall was c0.60m wide and constructed using hard-fired purplish red partially frogged bricks over a shallow concrete footing. The southern wall of Structure 1 was bonded into drain 10, while the northern wall was bonded into the remains of a north–south wall.

The largest single structure, Building 4, was excavated in the north-east corner of the site, and contained ten separate rooms. Overall, Building 4 covered an area of about 27 x 25m. Room 3, on the eastern side of Building 4, was rectangular in shape and measured 6.10m north–south x 5.10m east–west. Occupying the centre of the room was a large stepped brick plinth constructed on concrete footings. The plinth had a deep recess in its northern aspect, strongly indicating that the plinth was designed to support substantial items of machinery. The type of machinery involved would have been supplied by an iron pipe leading from the external area to the north of room 3, and is likely to have been involved with a high-temperature process, owing to the walls of the room being partially constructed with fire bricks. Analysis of makers mark's associated with the fire bricks used here, and elsewhere in the tannery complex, identified that these bricks had been sourced from specialist manufactures such as 'HICKMAN' and 'RUFFORD' in Stourbridge, and 'RAMSAY' in Newcastle (fig 10). A short length of truncated north–south contemporary wall had been positioned externally on the southern wall of room 3.

Room 4 was centrally located within Building 4, measuring 10 x 7.3m. Running down the length of the room were four low, evenly spaced, supporting walls measuring up to 1m thick. A brick floor partially survived between the supporting walls, which was blackened, as were the vertical surfaces of the support walls, indicating high-temperature processes taking place. This element of heating, plus the presences of lead pipes centrally set within room 4, indicates that either tanks or machinery may once have been set on the four support walls.

To the south of room 4 were two smaller rooms, 5 and 6, measuring c3m square in size. These were partially divided by a north–south wall, indicating a possible internal opening connecting the two rooms. A 4m-wide external opening is thought to have existed originally along the southern wall of room 5, but had been sealed by a later phase of brickwork. The remains of a dark grey brick floor, constructed from heat resistant fire bricks, were recorded in each room.

Adjacent to the west of room 6 were the remains of room 7. The western foundations of room 7 had been removed by later truncation, but the walls indicated the room measured 5 x 9m. A contemporary brick drain housing an iron pipe traversed the central width of the room.

Room 8, in the western portion of Building 4, was the largest room, measuring 28.7 x 8m. The only internal features within the room were a partial flagstone floor and small brick-lined drain.

Located to the north of room 4 was room 9, smaller than many of the others at 6.5 x 2.5m. A brick floor, as well as part of a small brick drain, survived within the room. The brick floor had been constructed using fire bricks, suggesting that processes involving high temperatures occurred within this room.

Positioned to the northern side of room 9 was room 10, which was distinctive in plan owing to the angled length of wall that had removed the south-east corner of the room. Room 10 was 8 x 6m.

To the west of room 10 was room 11, which contained possible brick plinths for machinery. To the east, room 12 consisted of three walls enclosing an area of 5.5 x 3m. Rooms 10, 11 and 12 are all thought to be part of a later phase of construction on the northern side of Building 4, as the walls for these rooms abut the earlier structure, with yellow stock bricks being used instead of reddish purple bricks. As part of this later extension, it is likely that the flagstone yard surface was laid between rooms 1 and 10.

In the central southern area of the site two additional structures were associated with the 19th century tannery. Structure 2 consisted of four red brick plinths, representing a square structure 7 x 7m in plan. The remaining plinths are assumed to have been removed by later truncation. Immediately to the south-east of Structure 2 was Structure 3, which appears to represent the brick foundations of a possible building measuring 8.2 x over 4.5m.

### *The tanning pits*

Four distinct groups of tanning pits were identified within the south-western, southern and eastern areas of the site (fig 9). The largest group, consisting of two sets of pits (tanning pit groups 1 and 2), were located in the south-west corner and comprised 89 pits in total. Seventy-seven of these pits were set out in a grid system within tanning pit group 1, covering an area of 20 x 18m. Each pit was lined with pine planks, and measured  $\approx$  1.5m square x 1m deep. The pits had been set at ground level due to the excavation of an extensive cut into which the pits were set, and the intervening areas filled with sandy or clayey packing material to support the sides of the pits. Voids had been left within the grid pattern where pits had not yet been inserted. The primary fill of the pits generally consisted of a white residue up to 0.60m thick. Chemical analysis of this residue indicated it was either slaked lime, or a lime-related material. Lime is a common material to find in context to tanning, as it was frequently used in the removal of hair and fat from the hides. The analysis also identified that arsenical organic compounds were being used in the treatment of the hides for the purpose of reducing bacterial activity within the leather in order to act as a preservative. The presence of rumen excretion and bovine brain can be attributed to the latter stage of the tanning process where dung was kneaded into the leather within a solution of animal brains to induce suppleness into the material.

Immediately to the east of tanning pit group 1 was tanning pit group 2, consisting of three large red brick-built structures covering an area 12 x 7m. Each brick structure was divided to contain nine individual tanning pits, each rectangular in shape, measuring  $\approx$  2 x 1.5m in plan and 1m deep. The majority of the pits contained brick floors, although repairs must have taken place at some point as stone slabs and timber had replaced the flooring material in several of the pits. A compacted white lime residue was also found at the base of the pits.

A small cluster of tanning pits, tanning pit group 3, was located close to the southern boundary of the site, present within a cut that extended 2.25 x 1.70m. Tanning pit group 3 had been truncated by later activity, but six pits remained, each measuring  $\approx$  1.75 x 1m. The pits were wood lined and constructed in a similar fashion to those in tanning pit group 1.

To the east of the site was tanning pit group 4. This group consisted of nine wood-lined tanning pits, mostly ordered in a single north-south row covering a distance of  $\approx$  14m. The pits measured 1 x 1.45m in plan and 1.5m deep. During construction, the wooden lining, also of pine, had been supported by a single vertical post on each side, prior to the gaps between pits being packed with clay.

Tanning pit group 5 lay directly adjacent to tanning pit group 4 and contained a single red brick structure 9.5m in length x 2.6m wide. The structure was divided into five individual pits, with each pit measuring 2.25 x 1.5m in plan, and 1.5m in depth, with rendered internal surfaces.



### *The drainage system*

During the course of the excavation a complex sequence of drains and culverts was recorded across the site, and was contemporary with the construction of the tannery buildings (fig 9). Certain drains and culverts were directly associated with specific buildings or rooms, while others traversed significant distances of the site.

Drain 1 was the most extensive brick culvert within the system; it was north–south aligned and over 45m long. Several culverts were identified leading into drain 1, with brick culvert drain 2, leading from the north-east corner of tanning pit group 2 into the southern section of drain 1. Another brick culvert, drain 3, ran 15m between the south-west corner of Building 3 travelling towards drain 1, where it is believed to have fed in at the mid-point along its length. In turn, other smaller drains appear to have discharged into drain 3. At its eastern end, drain 4 was thought to have acted as an overflow device from drain 11, while the truncated culverted sections of north–south drains 5 and 6 are thought to have fed into the mid-section of drain 3.

Numerous culverts and drains were recorded as servicing specific rooms or structures. Under the floor of Building 4, room 8, a 0.75m-wide brick culvert, drain 7, was located running north–south, while a north-east/south-west-orientated red brick culvert, drain 8, was associated with room 10. A 14m section of curvilinear brick culvert, drain 9, ran from room 4, beneath room 3, continuing to the eastern limit of excavation.

Of interest were two culvert structures, drains 10 and 11, associated with Building 2. Drain 10 was located on the eastern side of Building 2, partially incorporated into Structure 1. Drain 10 consisted of a rectangular cell structure with a brick floor approximately 6.5m in length x 1.5m wide. A brick-lined culvert appeared to feed into the cell structure from the east, the flow from which was once controlled by a sluice gate made from elm wood, the remains of which were found *in situ*. To the western side of Building 2, drain 11 measured over 50m running along the northern side of tanning pit group 1 and 2. Adjacent to Building 2, drain 11 consisted of an arched brick culvert 12.5m in length, 1.2m wide x 0.70m high. At the western end of this wide culvert was another wooden sluice gate controlling the flow of material into a narrower brick culvert, 0.5m wide, which, prior to truncation, would have led towards the tanning pits.

In the south-east corner of the site there were four additional smaller drainage structures and soakaways.

### *Domestic features*

The north-west corner of the site was the focus of domestic rather than industrial activity associated with the tannery (fig 9). The features consisted in the main of a range of domestic refuse pits, varying in size from 0.7m square x 0.25m deep, to the largest measuring 2.75m in length x 1.2m wide and 1.1m deep. Two brick-lined wells were also recorded, the largest measuring 0.8m in diameter. The fills of these features were fairly uniform, mainly representing a single phase of backfilling.

The finds assemblage from these features consisted of a large quantity of pottery, CBM, clay tobacco pipe, animal bone and glass fragments and was distinctive, strongly representing 19th century domestic activity. The pottery assemblage was the largest assemblage from any one single phase. Within the assemblage were post-medieval redwares (fig 11, nos 1 and 6), Sunderland-type slipwares (fig 11, no 3), yellow wares (fig 11, no 4), pearlwares (fig 11, no 5), and late creamwares representing a whole range of dinner, tea, kitchen and sanitary vessels. Several of the pits contained conjoining sherds, a strong indication of primary deposition. In addition to the ceramic vessels recovered, were two ceramic objects collected from one of the cesspits, representing an English stoneware dog's head whistle and English porcelain figurine (fig 12, nos 1 and 2).

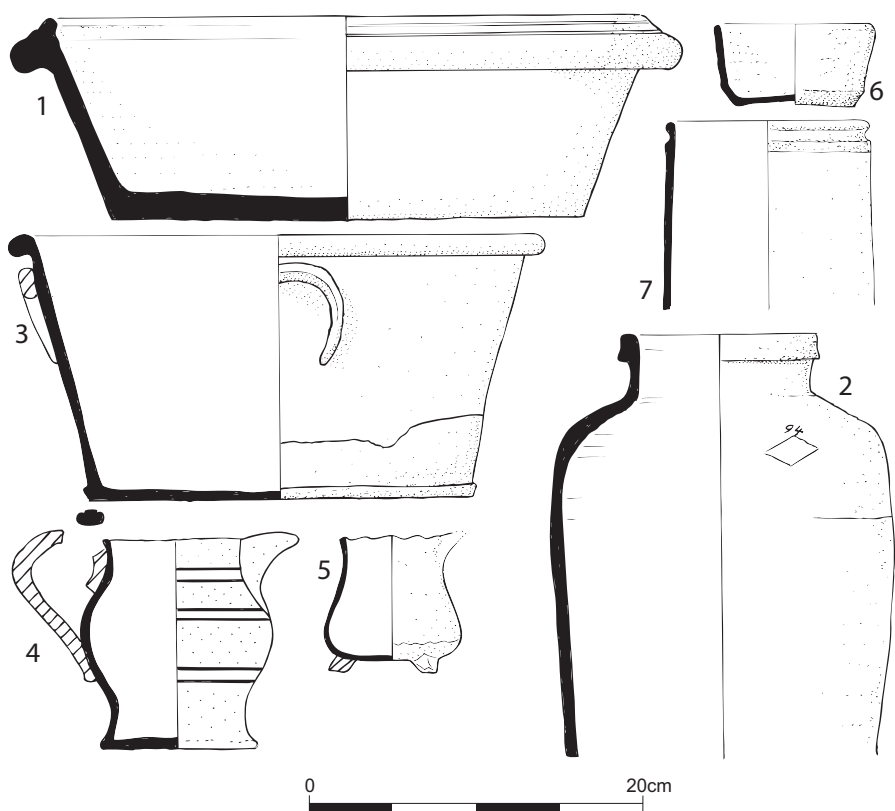


Fig 11 Spa Road, Bermondsey. Post-medieval pottery. 1) Large bowl; post-medieval redware; pit 23/420, fill 23/419. 2) Jar; English stoneware; pit 23/780, fill 23/779. 3) Large bowl with horizontal handles; Sunderland-type slipware; pit 23/888, fill 23/887. 4) Squat jug; yellow ware; cesspit 23/293, fill 23/292. 5) Tripod jug; Pearlware; cesspit 23/293, fill 23/292. 6) Small bowl/dish; post-medieval redware; pit 23/420, fill 23/419. 7) Preserves jar; English stoneware; pit 23/778, fill 23/779.

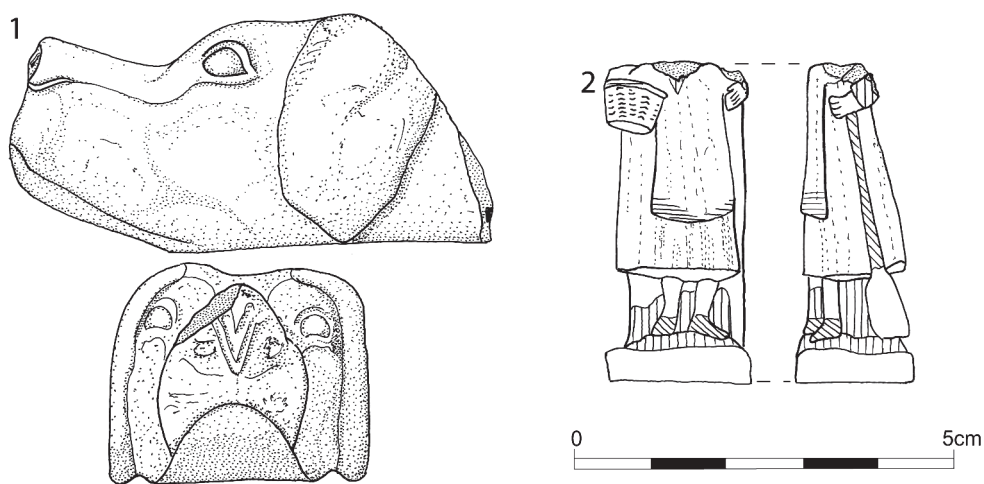


Fig 12 Spa Road, Bermondsey. Post-medieval ceramic objects. 1) Dog's head whistle; English stoneware; cesspit 23/293, fill 23/292. 2) Female figurine; English Porcelain; cesspit 23/293. Fill 23/292.

A large assemblage of clay tobacco pipe fragments from the pit and well features include many diagnostic forms. Many of the bowls had the marks of local manufacturers such as William Williams, James Critchfield and James Saunders (fig 13, nos 1–4). A high proportion of the clay pipe fragments were also decorated, including one in the form of a Turk's head (fig 13, no 7). Some of the clay pipe forms were poorly executed, which when taking into account the forms and wares present in the ceramic assemblage, suggest the finds assemblage as a whole derives from lower social status households.

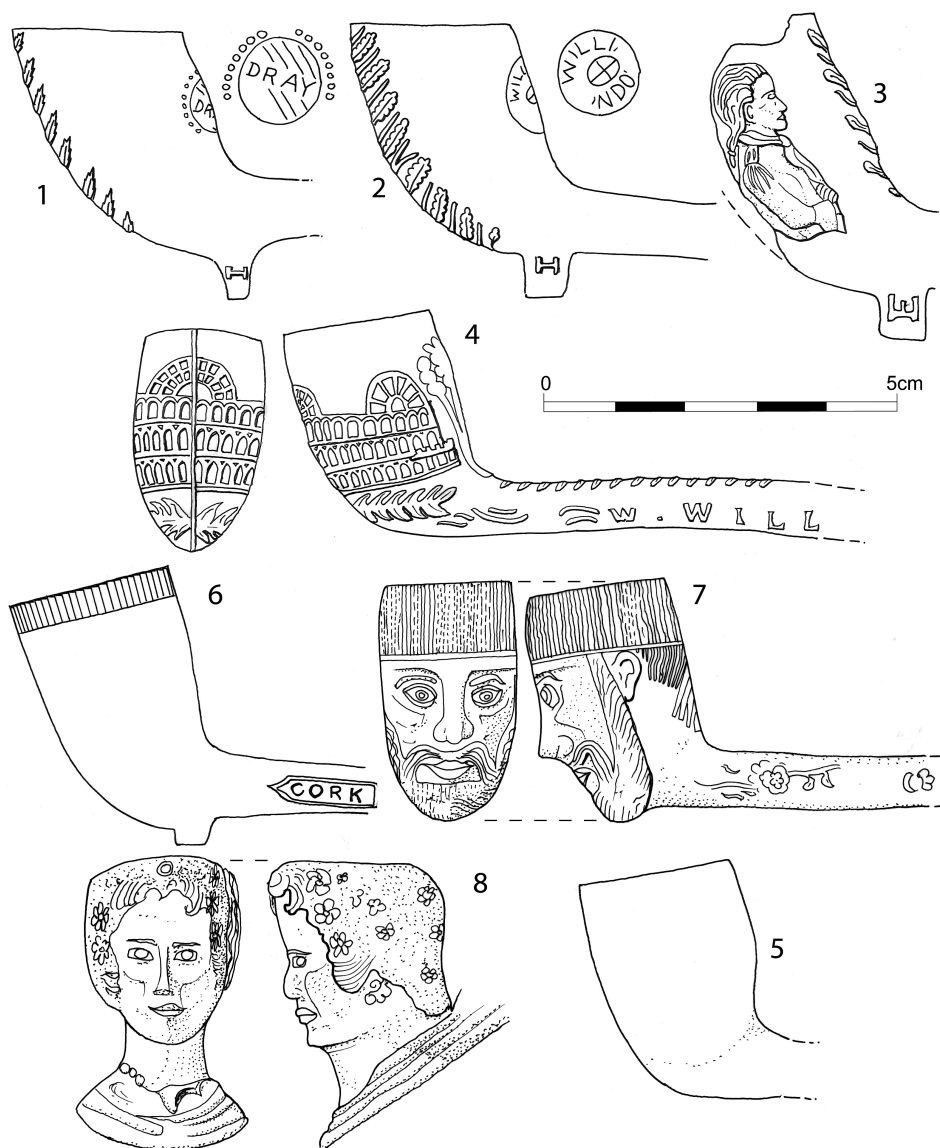


Fig 13 Spa Road, Bermondsey. Clay tobacco pipe bowls. 1) Bowl with leaf decoration stamped DRAY; cesspit 23/293, fill 23/292. 2) Corn ear stems stamped WILLIA[MS] [LO]NDO[N]; pit 23/317, fill 23/314. 3) Moulded bust of Nelson; ditch 23/225, fill 23/224. 4) Crystal Palace relief and stem leaf decoration moulded W.WILLIAMS and KENT.St.LONDON; cesspit 23/293, fill 23/292. 5) Burnished bowl; pit 23/131, fill 23/142. 6) Moulded clover leaf on spur marked CORK; cut 23/144, fill 23/143. 7) Turk's head; cesspit 23/293, fill 23/292. 8) Princess Alexandra figurehead; Structure 23/200, fill 23/210.

The only structural remains to be recorded in this area consisted of a single length of north–south red brick wall, 6.35m in length and 0.4m wide. At the northern end of the wall a partial east–west return wall survived.

PERIOD 3C: TANNERY ABANDONMENT (LATE 19TH CENTURY) (not illustrated)

By the late 19th century the tannery complex went out of use and was subsequently demolished. This phase of activity was represented by substantial quantities of demolition rubble backfilling the upper levels of all the tanning pit groups and several of the culverts. The backfilled features were subsequently sealed by extensive demolition horizons and levelling layers, preparing the site for further development.

There is evidence to suggest that some of the tannery structures survived the initial phase of demolition, as the construction of a new floor surface in room 11 is contemporary with the surrounding demolition horizons.

A range of finds was collected from the demolition deposits, primarily consisting of residual pottery forms. A proportion of the assemblage appeared to be contemporary with late 19th century forms, represented by English stoneware vessels (fig 11, nos 2 and 7) and Bristol glazed large jars and spirit bottles. Many of these had owners' or manufacturers' stamps such as 'Union Potteries. C. Bastin, Vauxhall Walk, Lambeth SE' (fig 14, no 1), 'JAMES COX' of Bethnal Green (fig 14, no 3), and a spirit bottle from the local public house, the Crown (fig 14, no 2). Two ginger beer bottles with makers' marks were also recovered (fig 14, nos 4 and 5). Other finds collected include decorative clay tobacco pipe bowls (fig 13, nos 5, 6 and 8), concentrations of fuel ash slag associated with high-temperature processes, and a large number of metal structural fittings. Several diagnostic fragments of CBM were also recovered, consisting of an 18th century tin-glazed Dutch delftware tile (fig 15, no 3)

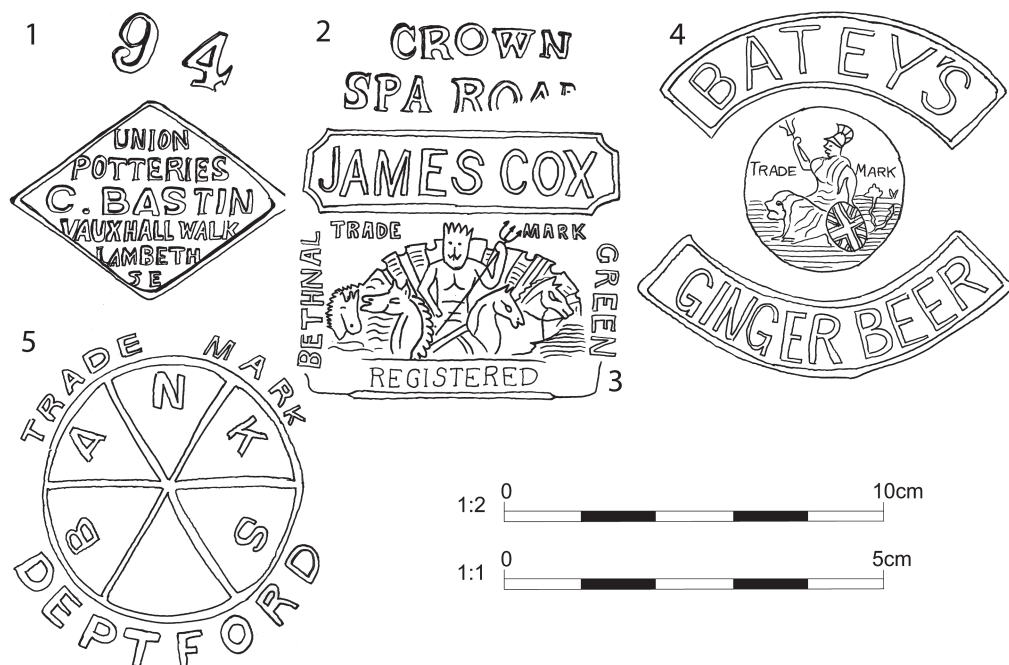


Fig 14 Spa Road, Bermondsey. Manufacturers' stamps. 1) Maker's mark C.BASTIN; pit 23/503, fill 23/008; (1:1). 2) Maker's mark CROWN SPA ROAD; pit 23/192, fill 23/190; (1:2). 3) Maker's mark JAMES COX; pit 23/240, fill 23/238; (1:1). 4) Maker's mark BATEY'S; pit 23/768, fill 23/774; (1:1). 5) Maker's mark BANKS; pit 23/768, fill 23/774; (1:1).

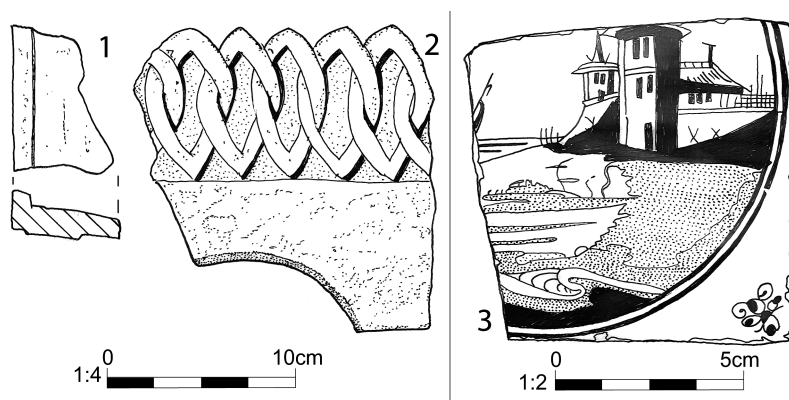


Fig 15 Spa Road, Bermondsey: Post-medieval to modern ceramic building material. 1) Flanged tile; pit 23/1622, fill 23/160; (1:4). 2) Decorative path edging; pit 3/003, fill 3/002; (1:4). 3) Delft tile; pit 23/1622, fill 23/160; (1:2).

probably once extant in one of the former domestic properties on site, and a flanged roof tile and decorative path edging (fig 15, nos 1 and 2), which are thought to date to the 19th or early 20th centuries. The most unusual items were numerous glass funnel and tube fragments associated with distillation, recovered from the backfill of drain 7 and demolition horizons in the north-east of the site. This collection of equipment strongly suggests that chemical distillation processes were taking place locally.

#### PERIOD 4: SALVATION ARMY COLONY (20TH CENTURY)

Documents held by the Salvation Army indicate that by 1899 the site was occupied by the Salvation Army City Colony (Pooley 2008). Extensive remains associated with this phase of activity were uncovered across the site, mainly concentrated within the west and north-east areas (fig 16).

In the north-east area the features comprised several brick floor surfaces, the largest in excess of 9 x 9m, and the brick foundations for a building measuring more than 7 x 3m in plan. Other features recorded include two brick plinths, 1.2m long x 0.4m wide, thought to be the bases for items of machinery or a furnace.

To the west were the bases of three large brick and concrete chimneys. The most substantial of the three foundations measured approximately 4 x 2m. These features were also associated with an isolated brick floor surface adjacent to the western boundary of the site.

Several less significant features associated with the use of the Salvation Army Colony were distributed across the site, consisting of small brick and concrete drainage channels or inspection chambers.

By the early 21st century the Salvation Army Colony was recorded as being disused and demolished, after which all features assigned to this period of activity were sealed by a horizon of modern demolition debris.

## Discussion

#### THE ROMANO-BRITISH PERIOD

With the exception of a few residual flint flakes, no direct evidence for prehistoric activity was identified; the first evidence for human activity on the site being a Romano-British trackway. One of the most significant aspects of the trackway is its location on the Bermondsey eyot, placing it as one of the most easterly of the Romano-British sites identified there, alongside the Croda Works site 50m to the south (Cowan *et al* 2009, fig 1). It suggests that the rural



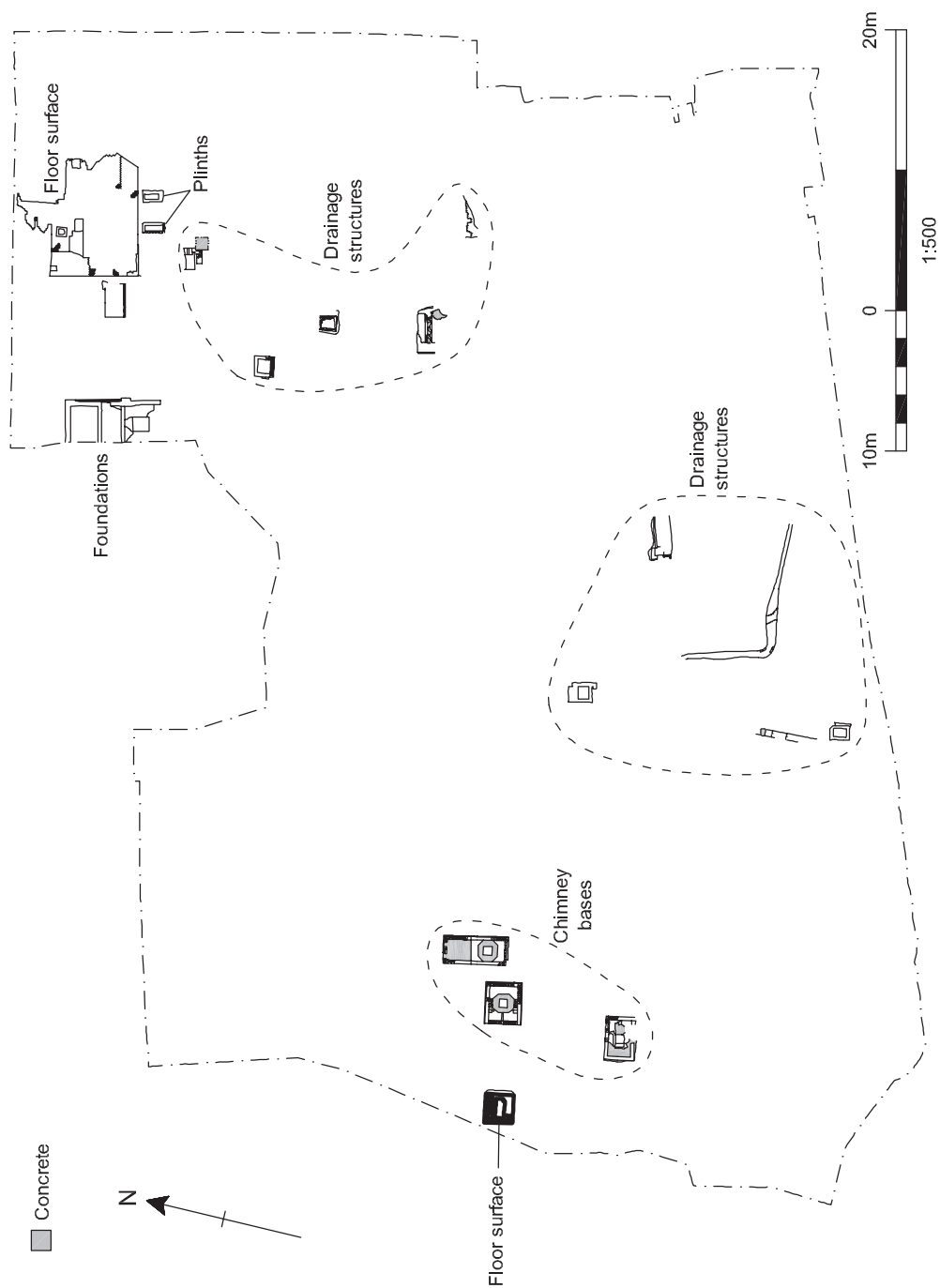


Fig 16 Spa Road, Bermondsey. Period 4: Salvation Army Colony.

hinterland of the Southwark settlement extended eastward from the settlement at Southwark out across the Bermondsey eyot. The line of the trackway had been re-established on the same alignment at some point during its history, suggesting a well-used route. It is highly likely that the north-east/south-west orientation of the trackway linked an agricultural or settlement focal point in the central area of the Bermondsey eyot to the Thames margin on the northern side of the eyot.

Owing to the lack of firm dating evidence it is difficult to determine a specific date for the use of the trackway during this period. In support of this chronological association with the Romano-British period, Heard (1996, fig. 2) extrapolated that a potential trackway, dating to this period, may extend through the vicinity of Spa Road at the same approximate orientation as the trackway observed on site. There is a strong possibility that this trackway may be one element of this extrapolated route. Further evidence for these minor roads or trackways, which would have linked the Bermondsey eyot to major arterial routeways such as Watling Street, has been found during numerous excavations in the Southwark area in locations such as the Courage Brewery on Southwark Street, and Hibernia Wharf at Montague Close (Cowan *et al* 2009, 64). These minor roads vary in form with both metalled and unmetalled examples, with many demonstrating several phases of maintenance or re-establishment. Such minor roads can vary in size from 4 to 9m in width, with the drainage ditches themselves up to 2.5m wide (Cowan *et al* 2009).

## POST-MEDIEVAL

### *Pre-tannery activity*

After a substantial hiatus in activity spanning from at least the 5th to the 16th centuries, the next period of activity occurred in the 17th and 18th centuries. A build-up of alluvial deposits in Period 2 recorded across the site is likely to have accumulated gradually during this hiatus as a result of cycles of inundation and flooding caused by the rise and fall of the level of the Thames. This area of Bermondsey is likely to have been uninhabitable for much of this intervening period.

The features associated with the 17th and 18th centuries were predominantly agricultural in nature, dominated by a series of north-south- and east-west-orientated ditches, with associated fence lines, representing one part of a larger field system. The field system covered an extensive area – the full 5000m<sup>2</sup> of the site. The north-south ditch suggests the field system was broken down into individual strips, with a trackway facilitating access to the south. The agricultural nature of the activity taking place is supported by the recovery of numerous small fragments of highly-abraded 17th and 18th century pottery, indicative of urban waste being transported to rural areas for the manuring of crops. This interpretation is supported by Rocque's map of 1746 (fig 2), which clearly depicts the site as containing north-south-orientated field strips, associated with market gardening.

Several pits post-dated the establishment of the field system, including two quarry pits and multiple domestic waste pits. The most notable of the pits associated with this period of activity is horn core-lined pit 23/893. The manner of construction would suggest there was a plentiful supply of horn cores, which were a by-product of the local tanning industry (Yeomans 2004). A similar horn core-lined 18th century pit was identified during excavations on Bermondsey Street (Killock 1999).

The only other features assigned to this period were the limited structural remains uncovered. This group pre-dates the construction of the tannery, but their function is uncertain.

### *The tannery*

With the transition into Period 3B, a substantial change occurs in the nature of the site. The predominantly rural environment was rapidly replaced by an extensive series of

structures representing the W Powell and Sons tannery and domestic structure adjacent to it. Contemporary documents and maps indicate that approximately 80% of the Powell and Sons tannery complex, in addition to the area associated with eleven domestic properties, was excavated. Combining the cartographic and documentary evidence with the archaeological evidence provides an excellent opportunity to produce a detailed picture of how the tannery complex evolved, and the processes taking place within it.

The first plan showing the layout of the tannery is the 1833–6 St Mary Bermondsey Valuation Plan (fig 3), which would have been produced within ten years of the construction of the tannery. The complex is extensive with five groups of buildings, three of which appear to fall within the site boundary, surrounded by a large yard area.

The group of buildings adjacent to the southern boundary is likely to have been concerned with the initial stage of the tanning process. A comparison of the excavation evidence with the 1833–6 Valuation Plan (fig 3), a sales document for the site in 1879 and the Goad Insurance Plan of 1887 (fig 4), indicates that the most north-westerly building in this block relates to the remains of Structure 2. The documents note this structure as being a two-storey building, with a hide store on the ground floor and a workshop above. This would be an ideal location to receive and keep the untreated animal hides and begin their initial processing, usually involving removal of extraneous bone, horn, skin and fat deposits (Bardens 1948; Dodds 1843). This initial processing would have produced significant quantities of animal waste that would have been sold to third parties involved in the manufacture of bone implements, glue and gelatine (Dodds 1843).

Adjacent to Structure 2 was tanning pit group 3, consisting of six rectangular pits marked on the 1833–6 map. These are likely to be liming pits for the de-hairing of hides once they had undergone initial preparation. A mix of lime and water (also known as milk of lime) would be prepared, which would loosen the hide epidermis and dissolve hair roots (Bardens 1948, 35) – a process that could take up to four or five weeks (Dodds 1843, 167). The 1833–6 map shows these pits as external to the surrounding buildings, although by 1887 they appear to be located within a two-storey structure.

The 1833–6 map shows a large rectangular structure, to the south of tanning pit group 3. The position of this feature correlates well with the position and size of Structure 3. The 1879 sales document refers to a puer shop with workshop and drying sheds above in this location. The puer shop would have been an element of the tannery involving a variation to the standard tanning process where instead of using a tanning agent, a sumach (an alkaline solution) would have been used. This type of treatment allowed for a softer, higher-quality leather to be produced, as the sumach removed the residual lime from the milk of lime immersion, which was prepared in a large vessel (Dodds 1843, 166–70). Structure 3 may have acted as the foundation for this large vessel, possibly a rectangular external tank, later incorporated into the two-storey fleshing shed, in a similar manner as tanning pit group 3.

No further structural remains were uncovered in the south-east corner of site, implying that heavy truncation of the tannery complex has taken place. Judging by the maps, this southern complex of buildings continued into this area and was part the extensive alterations and expansion of facilities undertaken at some point between 1836 and 1879.

The second group of buildings that appear on the St Mary Bermondsey Valuation map of 1833–6 consists of three isolated structures located centrally within the yard. The series of early walls associated with Building 3 appear to be related to the two rectangular buildings, while the large circular feature is located in the same position as Structure 1. This circular feature was most probably a large metal storage tank, with the linear brick piers of Structure 1 providing elevation and a stable support for the tank. In comparison to the later 1887 plan (fig 4), significant changes appear to have taken place. The two rectangular buildings and large circular tank have gone, replaced by a single rectangular structure marked as ‘Tanks on Brick Piers’. This accords with the archaeological evidence; the earlier walls associated with Building 3 were later replaced by a more substantial rectangular building containing rooms 1 and 2, incorporating six brick piers, and associated with the later large-scale storage

tanks. The purpose of the earlier phase of Building 3 is not clear, but is likely to have housed storage tanks of some nature, in combination with the large tank supported by Structure 1, which was replaced at some point during the mid-19th century by a single larger tank structure. Tanks for the storage of liquids would have been important owing to the high volume of water and chemical mixes consumed daily (Dodds 1843).

The early tannery complex also contained a large L-shaped group of buildings fronting onto Spa Road. Rooms 7, 8, 10 and 11 within Building 4 relate to this structure. The documentary evidence suggests room 10 was divided between use as a bark store and stables. Tree bark was a very important material in the production of leather, since the tannins extracted from the bark were used to convert the prepared hides, providing the finished leather with its distinctive dark brown colour and durable quality. During the 19th century the horse and cart would have been key for the transport of goods associated with the tannery, making a stables an important part of tannery operations.

Rooms 7, 8 and 11 all appear to be related to the tanning processes itself, as the sales document of 1879 describe this part of the complex as a tan house with drying sheds above and adjoining stores. The Goad Insurance Plan (fig 4) indicates that two large internal vats were associated with room 7. Tanning was the most time-consuming part of the leather manufacturing process, taking up to six months or more. Sometimes the prepared hides were pre-treated in a weak sulphuric acid solution (Dodds 1843, 164). The hides were immersed in a pit with the tanning solution and, once finished, the leather was dried out before further preparations such as beating or rolling took place to improve the consistency of the leather (*ibid*, 165). This drying and preparation of the leather may have been conducted in the area of rooms 8 and 11.

The documentary sources indicate that further development of Building 4 took place between 1836 and 1879. Rooms 3–6, 9 and 12 appear on the later 1887 map, indicating they were constructed between these two dates. At the centre of this extension of Building 4 is room 4, distinguished by the four brick support beams running the length of the room. The Goad plan (fig 4) depicts two large rectangular features where the brick beams are positioned, with the sales document strongly implying that these features are water boiling tanks housed within this room. The construction of the room using fire bricks and the observed blackening of the walls and floors, would support the supposition that high-temperature operations for boiling water were taking place. Stokeholes for accessing the boiler furnaces are also noted in the sales document, and could have been located in rooms 5 and 6, as the floors for these rooms were also built from firebricks to resist the heat from the furnaces.

The purpose of these boilers was potentially twofold. The first function appears to have been to provide steam for an engine, noted in the sales document. This engine is likely to have been located in room 3, immediately adjacent to the east of room 4, where pipes would have conveyed the steam to a steam engine located on the large central brick plinth in the room. There is a strong likelihood that the power was transmitted to the finishing shop, recorded in the sales document as being on the second storey of this building. The second function of the boilers was likely to have been to provide steam to assist in the drying of the tanned leather, as the boilers are annotated on the Goad plan: 'Steam Drying Over'.

Ancillary rooms are also known. Room 12, adjacent to room 10 according to the 1887 map, appears to be an extension to the existing bark store. The function of room 9 is unclear, but it may be the engineer's shop and store mentioned in the sales document. A smithy was probably associated with the fragments of walls attached to the northern side of Structure 1 and southern side of room 3.

The latest building to be constructed, as recorded in the sale document of 1879 as the only building to be newly erected, was Building 1 the limited remains of which were found in the northern area of the site. The building was described as a warehouse with drying sheds above, and marked on the Goad plan as 'Leather and Skin Warehouse'. The storage of leather and skin within the warehouse implies that both the raw animal hide material and finished leather product were stored here during the later period of use of the tannery. The position

of Building 2 in relation to Active Place would be an ideal location from which to distribute the hides throughout the complex, and store the finished leathers before despatching them to the various leather goods manufacturers.

The position of the tanning pit groups within the development of the tannery can also be identified. Tanning pit groups 1, 2 and 4 are first identified in the sale document of 1879, placing them as developments within the tannery complex after 1836. Tanning pit groups 1 and 2 are depicted on the Goad plan, with tanning pit group 2 clearly marked as being under cover and associated with air-drying. These pits were likely to be involved with the initial process of de-hairing of the hides by immersion in lime solution. Tanning pit group 4, located adjacent to Building 4, labelled as tan pits on the Goad plan, implies that these pits were utilised as part of the later tanning process than the initial liming process.

The tanning pit groups were in two different styles, consisting of either wood-lined or brick-lined pits. On the Goad plan tanning pit group 2 is associated with a covered structure, which may explain the use of brick in its construction, with the brick being able to provide a stable foundation for these structures. By implication, this suggests that brick-built tanning pit group 5 may have also supported a covered structure. The remaining tanning pit groups demonstrate a deliberate use of pine in their construction, which is consistent with the trend for Bermondsey tanneries to use softwood in the construction of tanning pits during the 18th and 19th centuries (Elsden 2001, 281; Heard 2000, 142). Currently, no detailed studies have taken place into the trends in the use of different wood species utilised in the 19th century tanning industry, preventing firm conclusions being reached on the use of pine wood at this time. No definitive interpretation can be reached when possible explanations range from the costs of available materials, through to deliberate selection of such woods due to desired properties. Further research on this subject would produce significant insight into development of the tanning industry at this time.

What is not recorded on the maps or within the documentary evidence are any details relating to the system of below-ground drains and culverts identified during the course of the excavation. These were a key aspect of the operation of the tannery allowing the waste solutions to be drained away. Drain 1 appears to be the main drain, which is likely to have discharged into one of the many tidal streams leading to the Thames in this area (Dodds 1843).

The relationship between Building 2 and drains 10 and 11 implies that Building 2 was related to the movement of water or chemical solutions within the tannery complex.

Analysis of the tannery remains has identified a complex series of buildings, structures, pits and culverts related to the tanning process. With the identification of the Tanning House and Puer Shop, it is known that at least two different processes of leather production were being undertaken. It is clear that development of the structure continued over the course of its 70-year lifespan. Initially, in the mid-1830s, the tannery complex consisted of three key groups of buildings in the southern, central and northern areas of the site. Archaeological and historical evidence demonstrates that the complex had evolved as significant changes had occurred by 1879. All three building groups received alterations and additions: the buildings to the south were extended; the tanks in the central area were reorganised, and a boiler house and engine house were constructed, together with ancillary buildings, in order to supply power to new machinery. During the same period, three new pit groups were constructed: two sets of what were probably liming pits to the south-west of the complex and one set of what were probably tanning pits to the east. Associated with the construction of the south-west pit groups was a system of culverts and machinery to assist their supply. The last building to be constructed, in *c* 1879, was a large warehouse with drying rooms adjacent to Active Place. This staged process of development is likely to be closely related to the economic development of the tannery.

Analysis of the 1896 OS map provides an opportunity to compare the scale of operations at the W Powell and Sons tannery with contemporary tanneries in Bermondsey. The *c* 0.5ha area of the W Powell and Sons tannery places it as one of the more moderately-sized tanners'



yards in the area, of a similar size to yards at the junction of Tanner Street and Tower Bridge Road, although it is dwarfed by the Neckinger Mills tannery on Abbey Street, which is approximately four times larger.

A review of the available literature indicates that no tanning yards contemporary with the W Powell and Sons tannery in the London area have received detailed archaeological investigation, thus restricting the comparative material available.

### *Domestic activity*

A proportion of the 19th century features identified on the site are associated with domestic occupation, all of which was located in the north-west corner. This is represented by rubbish pits, cesspits and wells that were dug to the rear of houses fronting onto Active Place and Spa Road, and in the vacant plot of land fronting onto Amelia Row to the west. Structural remains of these properties were limited. The most significant aspect of these features relates to the domestic finds assemblage they produced, containing a range of material including pottery, glass, clay pipe fragments and CBM. When viewed as a whole, the assemblage indicates the presence of low social status households, based on the general dominance of plain late creamware and plain pearlware over the more expensive transfer-printed wares within the assemblage. The continued use of older, out of date, finewares may also be a sign of lower status households. The analysis of the pottery assemblage is supported by documented evidence for poverty experienced in the area. Evidence of the low social class nature of this housing can be gleaned from sales documents, which list the seven properties on Active Place as being relatively small, consisting of two rooms and a kitchen, while the properties fronting onto Spa Road contained four rooms and a kitchen. Unfortunately, analysis of the finds assemblage from this area of the site was not able to define from which set of houses each group of finds was derived. A review of the census records for the 19th century indicates that the residents at Active Place and Spa Road were employed in a variety of skilled and unskilled manual occupations, including a leather dresser, machinist, glover, shoemaker, laundress and decorator, which would correlate with the lower status range of finds collected.

Demolition of the site in the 1890s was extensive. It appears that a proportion of the demolition debris remained on site and was used to backfill the tanning pits and level the site ready for redevelopment. The latter supports the documentary evidence indicating that demolition took place in the late 1890s. The demolition of the tannery complex does not appear to have been comprehensive, as evidence of later floor surfaces in room 11, part of Building 4, suggests some form of activity was taking place here during or after the demolition of the tanner's yard.

### MODERN

The final phase of activity identified on the site associated with Period 4, is represented by the modern remains of the Salvation Army City Colony, recorded as being in operation from 1899 to 2002 (Pooley 2008). The remains of the City Colony were restricted to the foundations of several industrial chimneys and smaller structures, floor surfaces, drainage features and two machinery plinths. The remains of chimney stacks and machine bases support the documentary evidence for the industrial aspect of the City Colony, since it is known that multiple hydraulic presses were employed in the processing of waste paper, and large boilers employed in the laundry (*ibid*).

The reasons for the construction of the City Colony were tied closely to the core purposes of the Salvation Army: to ease suffering and improve the quality of life for those who were destitute. By building the City Colony, the Salvation Army aimed to support the poor of the Bermondsey area by providing a reliable source of food, shelter and accommodation (*ibid*). The concept of the charitable Colony institution was not new, as the Salvation Army had

also established another Colony near Hadleigh, Essex by this time, while also supporting poor communities in the East End of London (*ibid*). The presence of the Salvation Army City Colony is a clear reflection of the level of poverty experienced in this area in the late 19th and 20th centuries.

## Conclusions

The archaeological investigation at Spa Road produced significant evidence for both Romano-British and post-medieval activity on the site, increasing the corpus of knowledge for these periods in the history of Bermondsey. The identification of a Romano-British trackway located on the Bermondsey eyot develops understanding of the hinterland surrounding the Romano-British settlement of Southwark.

It was not until the 17th century that the site was once again exploited with significant levels of agriculture taking place. Within the following 200 years, this rural landscape was rapidly incorporated into the urban development of London. The opportunity for the near-complete excavation of a 19th century tanner's yard is rare, making the results of regional significance. Analysis of the tannery remains has allowed a rigorous comparison between the archaeological evidence and contemporary cartographic and documentary sources.

## ACKNOWLEDGEMENTS

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