

Excavations at 43 High Street, Reigate 1981

by DAVID W WILLIAMS

Summary

A rescue excavation at the rear of 41–43 High Street, Reigate, undertaken from April to June 1981, located the well-preserved remains of a malting kiln of uncertain date, demolished *c*1700. A well, filled in in the 16th century, and part of a medieval structure, possibly another kiln, were also found. Limited salvage work on an adjacent area recovered a line of over 30 medieval drainpipes. Observation of building work on the bulk of the development site (45–51 High Street) yielded, in contrast, no evidence of structures or of medieval occupation and it is suggested that this area was not built up until the 19th century. An excavation beneath the floor of no 43A, a 17th century building now moved to the Weald and Downland Open Air Museum, revealed a medieval wall foundation.

The work was carried out by the archaeological group of the Holmesdale Natural History Club under the direction of the writer, on behalf of the Reigate and Banstead Archaeological Coordination Committee.

Introduction

In early 1981 the Holmesdale Archaeological Group proposed to carry out limited trial excavations on land to the rear of 19th century buildings then due to be demolished to make way for the redevelopment of 45–51 High Street. Little was expected from this work as there are no documentary references to earlier structures on the street frontage. Subsequent observation of the building work confirmed this lack of intensive occupation but while negotiating for access with the developers it was learned that the development site extended further to the east than had been realised. It was now seen to involve the demolition of no 43A (an adjacent early 17th century building) and to include the removal of an area of overgrown garden situated some 10m behind 43A and extending to the rear of no 41.

It was decided at once to concentrate the effort on a single trench (Area 1) to encompass as much of this confined garden area as possible, although part had to be used for spoil piling. It was hoped the work would locate any structure ancillary to no 43A and that observation during earthmoving could take place after the demolition of buildings on the remaining bulk of the site. This strategy was subsequently proved to be the correct one but an unfortunate incident later in the excavation brought into question the practicalities of part-time urban excavation. A time limit of approximately two months was imposed on the work but in the event this was extended after the discovery of the kiln and all unexcavated layers were reinterred beneath part of an access road which now covers the site.

The Site

The excavated areas (fig 2) form part of a larger development site which occupies a roughly central position along the south side of the High Street (fig 1). The redevelopment involved the demolition of the stone-built former Public Hall of *c*1860, the former Police Station and an assortment of single-storey shop extensions. The only building known to have stood within Area 1, the main excavation, was an insubstantial, late 19th century brick outhouse demolished in the 1960s when the garden area to the south was surfaced as a car park. The earliest large scale survey of Reigate, that of Bryant in 1786 (SRO 445/3), shows the area as part of a garden to the south of the house of a Mr Tooth (fig 3), but the present boundaries enclosing Area 1 seem to relate to the

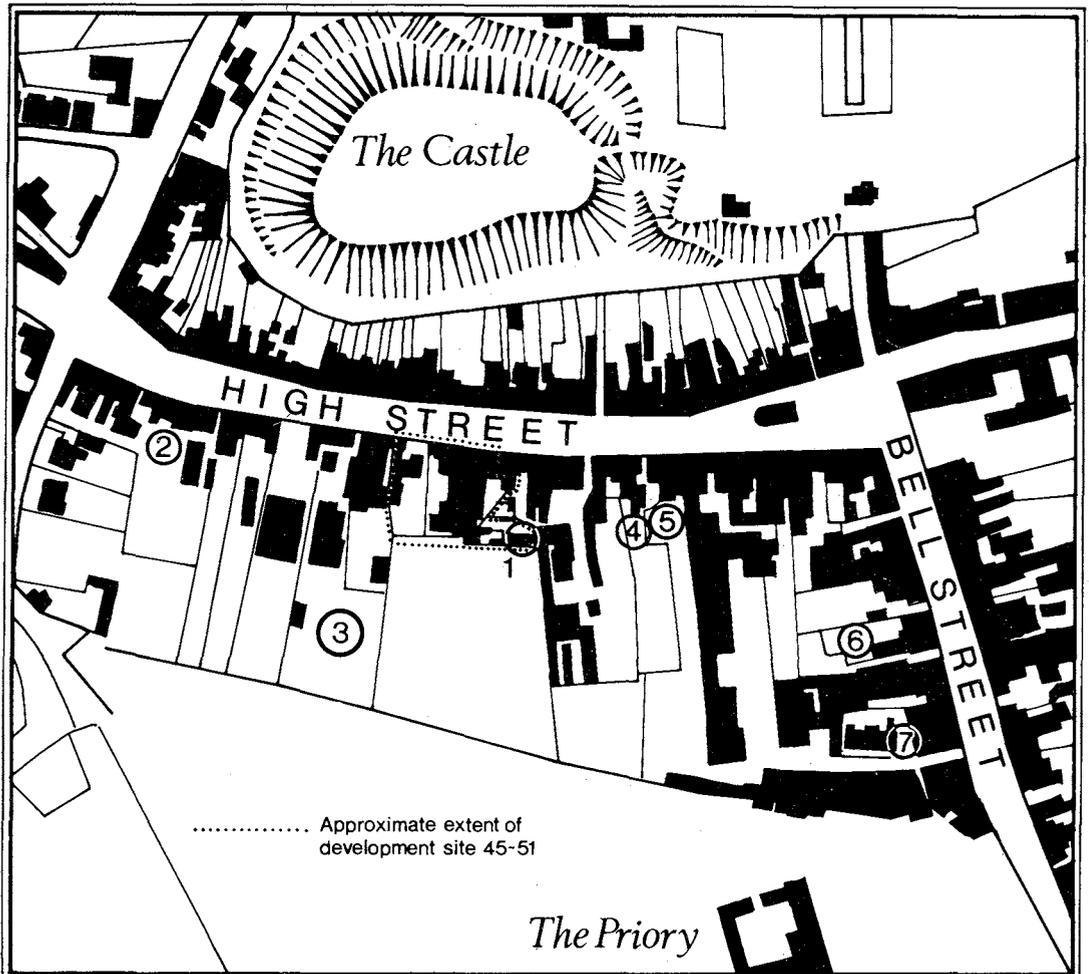


Fig 1. Reigate town centre, showing location of excavation and previous sites excavated: 1 43 High Street; 2 The Pantry (Woods 1974); 3 Congregational Church (Slade 1977); 4 Timothy White's (Woods 1974); 5 National Westminster Bank (Trier 1974); 6 16 Bell Street (Williams 1983); 7 Brewery Yard (Williams 1980)

garden of a small brick cottage, recently demolished, which stood immediately to the south of the Public Hall. The area to the west, that occupied by the bulk of the present development, is shown on Bryant's Survey as a mostly open area, a yard with barns and stables and few buildings of any substance.

As mentioned in the Summary, the 17th century timber-framed building, no 43A (see Appendix and pl 7), has now been removed for eventual exhibition at the Weald and Downland Open Air Museum. The dismantling operation took place during the later stages of the excavation, after which it proved possible to excavate beneath the floor (Area 2). The building will be dealt with in detail at a later date but a short descriptive summary by Richard Harris is given below.

Geologically, the town stands on the Folkestone Beds of the Lower Greensand, of which an isolated knoll was utilised by the builders of the Castle. The High Street runs as a terrace along the south side of this hillock on which the Castle stands, resulting in a slope downhill from north to south across the High Street. This is likely to have resulted in differential preservation of archaeological deposits. On the north side of the street these cannot be expected to have survived

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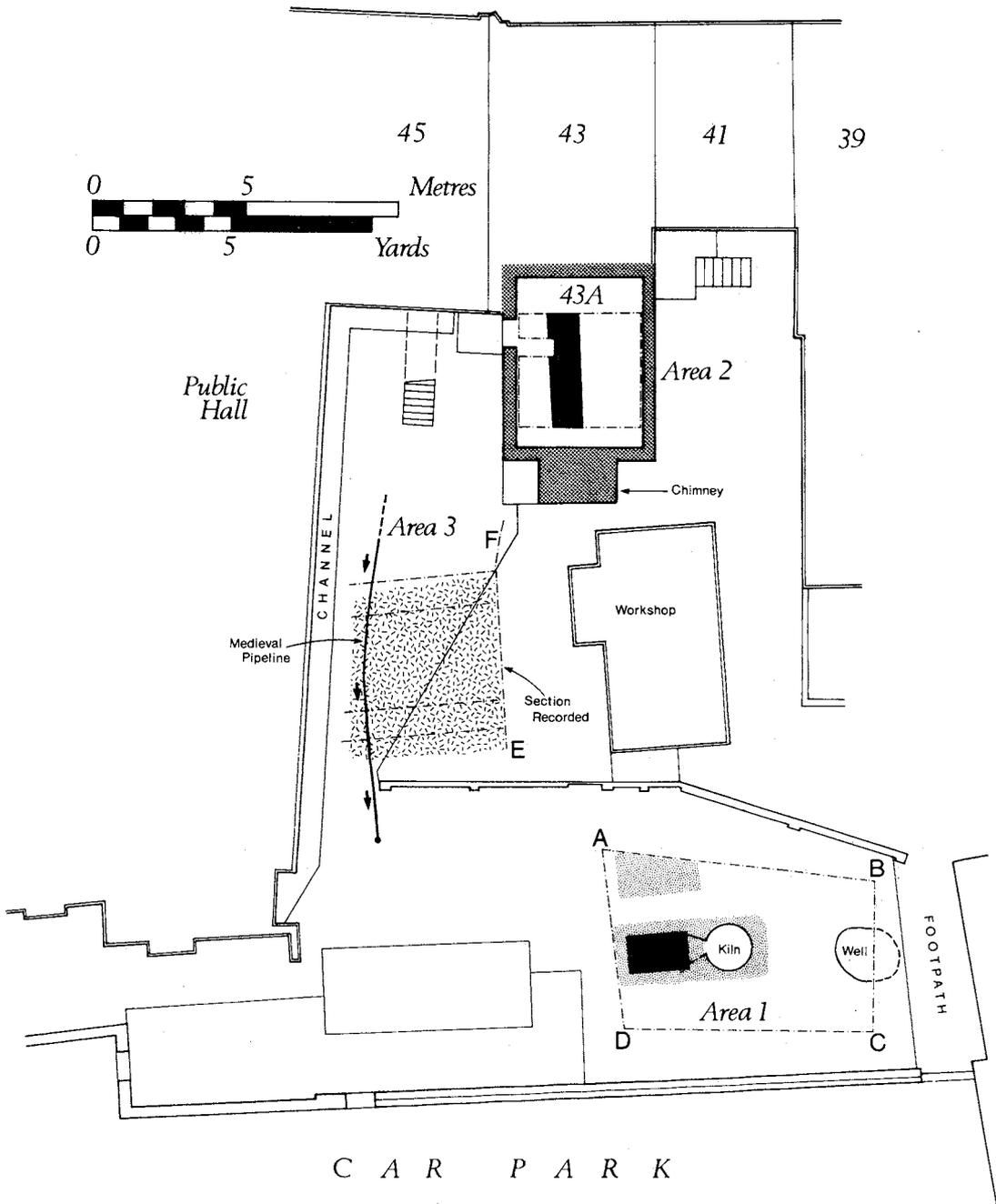


Fig 2. 43 High Street. Location of excavated areas. Extent of chalk layer in Area 3 shown as tint.

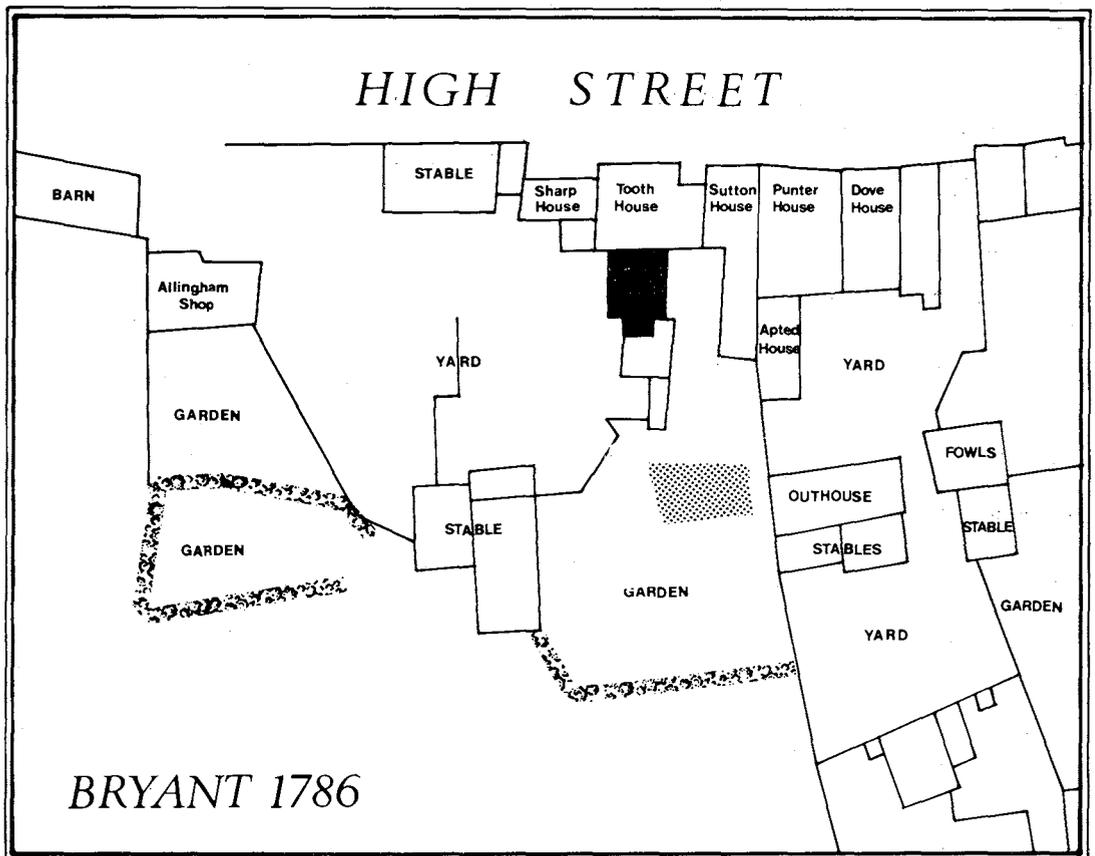


Fig 3. Part of Bryant's Survey of Reigate, 1786. Approximate location of Area 1 shown as tint, no 43A as solid.

so well (although this has not yet been tested by excavation) as buildings have been terraced back into the steep southward-facing slope. The available space was increased from at least the 16th century by tunnelling into the hill, ostensibly to quarry the fine quality silver sand of which the hill is composed, but also perhaps as a means of increasing the restricted area for storage and other purposes. On the south side of the High Street the gradient eases off and although terracing still occurs archaeological deposits have mostly survived well where tested, often to a depth of over a metre.

Previous excavations in the High Street, however (as pointed out in Williams 1983), have failed to find evidence of medieval structures *in situ*, medieval remains being mainly confined to scatters of pottery and other material in a ploughsoil overlying the natural sand. Similar situations occurred at Brewery Yard (Williams 1980) and 77-9 Bell Street (Williams 1979), the latter to the south of the town centre, and previously only at 16 Bell Street (Williams 1983) have substantial medieval remains been found. Medieval structures survive at 15 Bell Street (the former St Lawrence's chapel) and at 16 West Street (the undercroft). It is perhaps still too early to speculate usefully on the form and density of the medieval town although evidence to hand might suggest scattered dwellings along the High Street with more intensive occupation in Bell Street and perhaps also around the two market places.

At the site under discussion the natural slope of the land was visible when previous ground levels beneath the topsoil were reached. Prior to excavation, Area 1 presented a mostly level appearance due to the topsoil being piled against the wall to the south which acted as a retaining

wall. No 43A itself had been terraced back into the hill slope.

The preservation of archaeological deposits was generally good. In Area 1 about a metre of accumulated 18th and 19th century garden soil had preserved earlier layers. In Area 3 a similar depth of topsoil was removed by machine but it was noted that in the north of the area the earlier layers had been severely disturbed by modern pits. The medieval pipe line discovered in Area 3 was mostly intact but its line had been broken in 1980 by an engineer's test pit which indirectly led to its discovery.

Documentary Evidence

This note on the documentary evidence, which relies heavily on the work of Jeremy Greenwood, has no claims to be a definitive history of the site but is intended to bring out those points of particular relevance to the archaeology.

The property is thought to cover roughly all of the area of the present development. The eastern property boundary is understood to be between nos 37 and 39 High Street. The George Inn, mentioned twice below, was situated at nos 31 to 37 High Street, to the east of the site under discussion. It is worth pointing out that the documentary evidence regarding ownership is almost continuous from 1382.

Before 1382 The site was owned by Richard Skinner (burgess for Reigate).

1382 It was conveyed by Richard Skinner to Philip Browne, constable of Reigate Castle, (Lewis 1894) and reverted in 1412 to the Skinner family in whose ownership it remained until 1575. Conjecturally one might suppose that here stood part of a complex of buildings serving either as Browne's home or perhaps also as lodgings for important visitors to the Castle. The position of the site, almost opposite the main entrance to the Castle from the town, should be noted and a building of some substance seems likely. The Skinners were the most important family of long standing in Reigate, providing many members of parliament from 1351 onwards (Hooper 1940, 115). Other owners or tenants included John Bray (from 1409–13), vicar of Reigate, and Robert Ware (mentioned as a brewer in the 1570's) (Cockburn 1980, no 105).

1575 John Skinner conveyed to John and Robert Thompson, brewers, a messuage between the George on the east and a croft of Robert Skeete on the west and adjoining the Priory on the south (SRO 371/8/229).

After 1575 the property was gradually split up or sublet (SRO 371/8/221–245) and is specifically referred to as a brewery. As a result of this fragmentation it is not always clear to which part of the property reference is being made.

1587 Robert Thompson leased to Richard Cade for seven years part of a messuage comprising a brewhouse, a shed at the west end of the barn, a mill house, stables, a hay house, a chamber over the well house, a parlour next to the kitchen, a chamber over the parlour and a cellar under the same, two little rooms adjoining the parlour, part of the orchard and the equipment of the brewhouse (SRO 371/8/230).

Robert Thompson conveyed to Walter Cade, citizen and haberdasher of London, a messuage excepting the kitchen, upper house, cellar under the last, two chambers over the same, hall, parlour, chamber over the hall, chamber over, two inner butteries and a corn chamber over the same, a barn next to the brewhouse, a loft over the brewhouse, a loft over the millhouse and over the stables, but including the brewhouse (SRO 371/8/231).

The Cade family eventually obtained ownership of the entire property, prospered, and left Reigate but retained ownership of the brewery which was occupied and operated by one Samuel Wilde (SRO 371/8/240).

1621 On the death of Walter Cade in 1621 his two sons inherited the brewing equipment, value £32 18s 8d, consisting of 'a copper kettle, mash tunne, gyle tunne, sweetwort tunne, under back, two coal backs, gutter, maltmill, leaden cisterne and a pipe of lead' (SRO 371/8/234).

As a result of the division of the property among Cade's three children and a grandchild the subsequent history of the property becomes very complex.

1627 A lease of the messuage, then in occupation of Jane Wilde, widow of Samuel, brewer, mentions the cellars, vaults, chambers and brewhouse, barn, millhouse, maltmill, stable and brewing vessels, garden and wellhouse (SRO 371/8/237).

1654 By this date it was occupied by Walsingham Heathfield, brewer (SRO 371/8/239).

1688 After previously leasing them, together with John Arnold, brewer, George Taylor brewer (Walsingham Heathfield's father-in-law), purchased the malthouse and brewhouse (SRO 371/8/244). On Taylor's death they passed to his son-in-law, Henry Ware, an oatmealman, who used the maltmill for grinding oatmeal (SRO 371/8/249, GLRO DW/PA/7/17/f76).

1689 An agreement between George Taylor, Jane Blatt and her son Thomas, an oatmealman, refers to '... an ancient building of the said George Taylor ... used for a stable, and now in the tenure of John Tooth, unto which the said Jane Blatt and Thomas Blatt have the head of a barn lately built and now used for a millhouse soe near adjoining that by the drippes of the said Stable Eves as well the said George Taylor as the said Jane Blatt and Thomas Blatt may susteyne damage (SRO 371/8/245).

1712 The property was leased by Mary Ware (George Taylor's daughter) to John Constable of Betchworth, maltster, for 11 years.

1717 Henry Ware conveyed to John Constable a messuage or dwelling house, a building called a pump house, a house formerly a millhouse, a millhouse and stable, a malthouse, an oasthouse and chamber and a chiphouse or hovel, the south part of a cellar under the dwelling house parlour and a yard and gateway between the dwelling house and the gateway to the next property (SRO 371/8/250).

At this time the property was in the occupation of four different persons — a mealman, a feltmaker, a carpenter and a labourer (SRO P49/1/7).

1749 The property was sold by James Sutton, maltster (the brother-in-law of John Constable), to John Cocks, owner of the manor of Reigate (SRO 371/8/254; SRO 445/1).

1786 It was described by Bryant as 'A messuage, malting house, stable yard, garden and field the messuage being made out of a Brewhouse ... supposed to be the brewhouse to the Old George Inn'. It was in the occupation 'late of Thomas Sutton' (SRO 445/1 no 203). It was not in fact part of the George.

The Excavation, Area 1 (TQ 2522 5021) (figs 2, 4, 5A, 5B)

SUMMARY

The main excavation was located to the rear of no 43A from which it was separated by about 10m on which stands a small modern brick workshop. Area 1 was bounded to the north by a low brick wall, to the east by a modern footpath providing access from the High Street to the car park, to the south by a tall brick wall and to the west by the Public Hall and a temporary 'Portaloo' whose

43 HIGH STREET, REIGATE

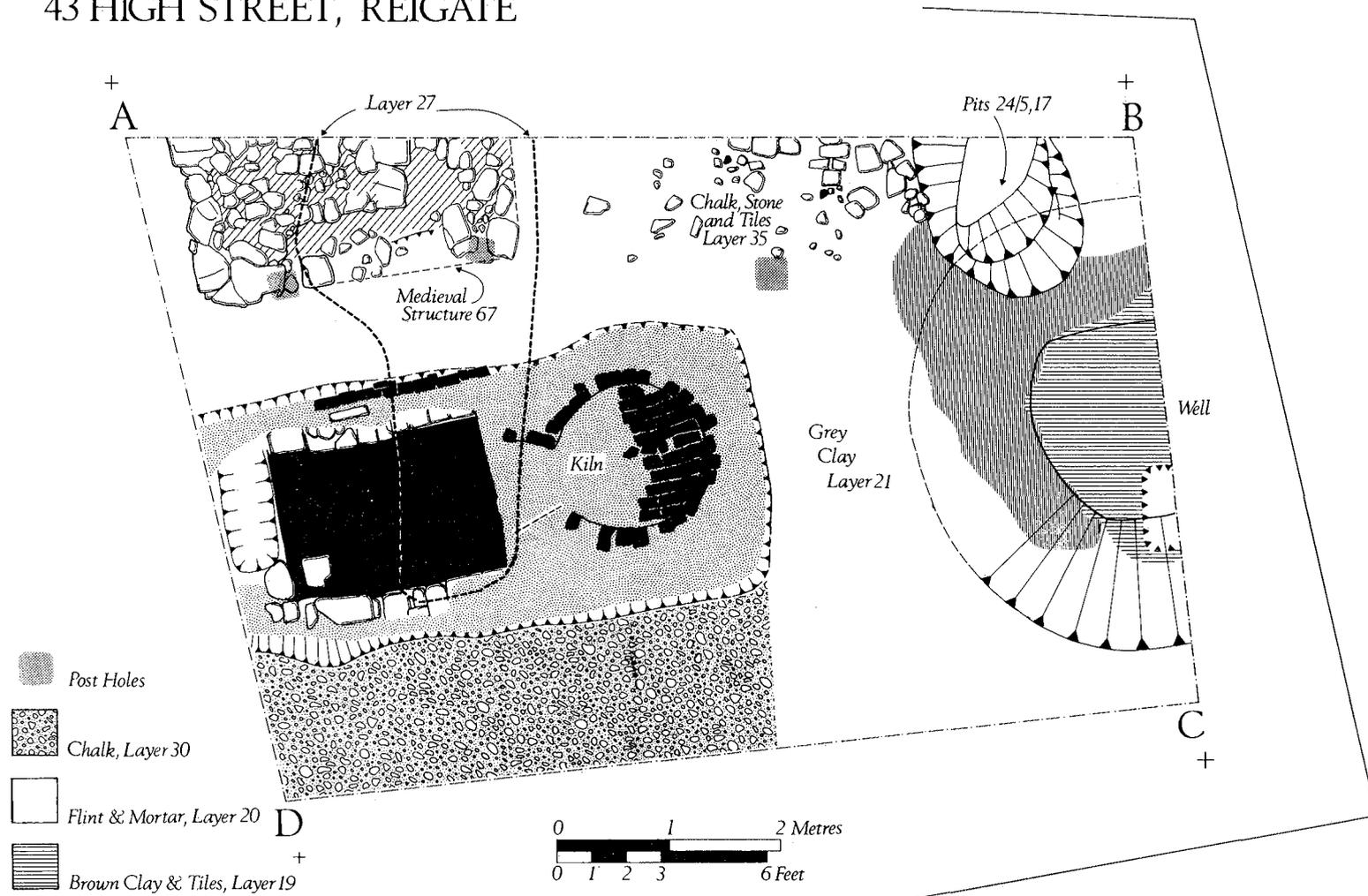


Fig 4. 43 High Street. Plan showing main features excavated in Area 1.

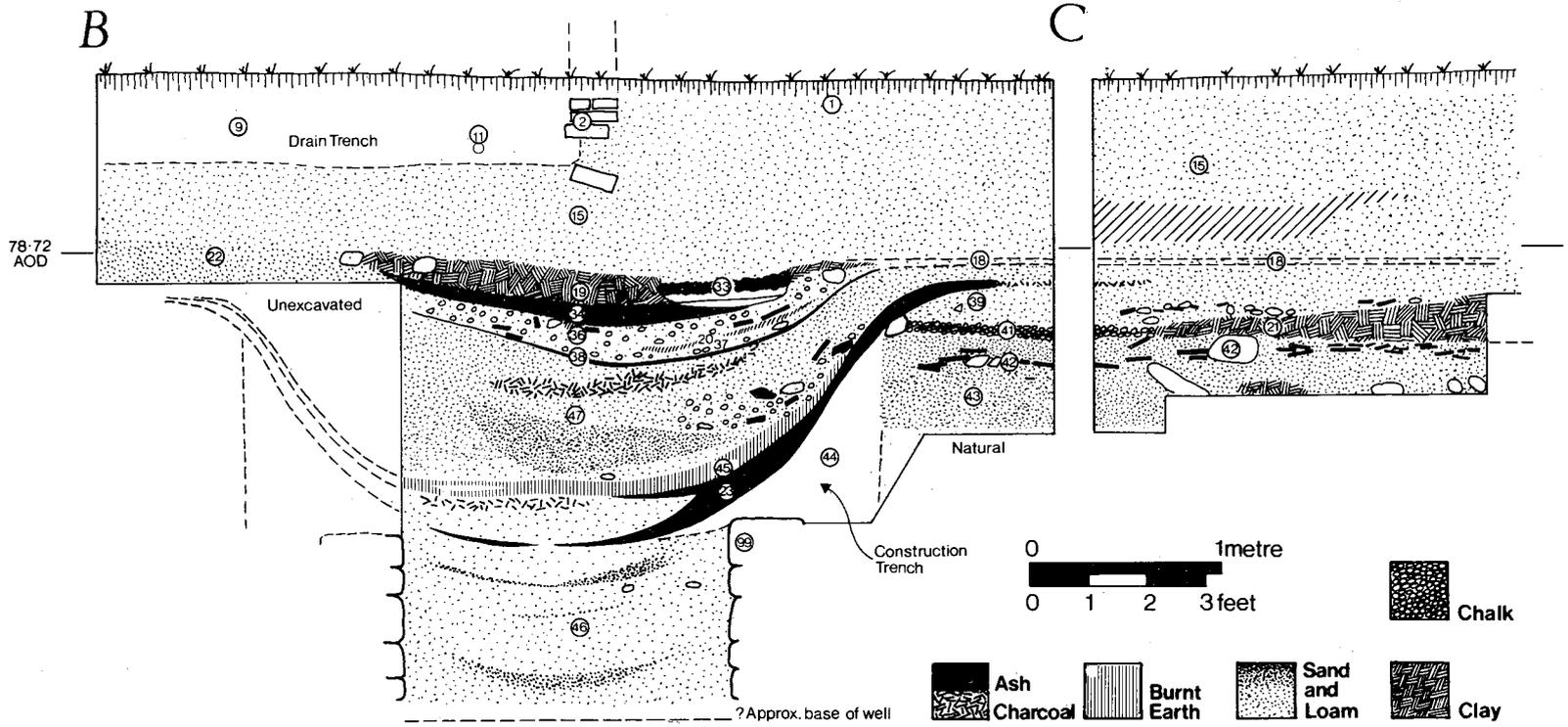


Fig 5A. 43 High Street. Section BC in Area 1. For location see fig 4.

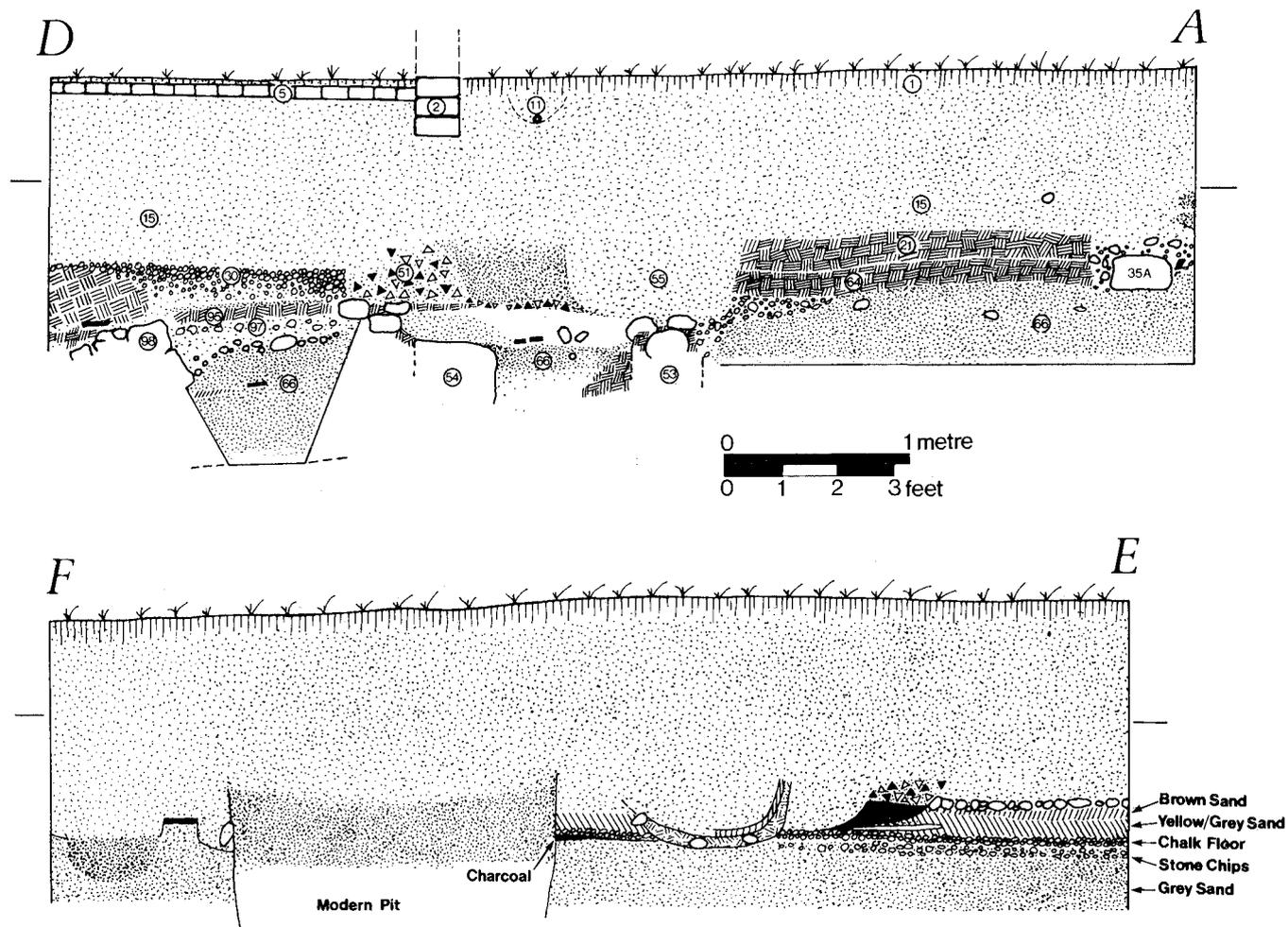


Fig 5B. 43 High Street. Sections AD and EF in Areas 1 and 3. For locations see figs 2 and 4.

installation had necessitated the removal of deposits to the level of the adjacent car park.

The remains of a late 19th century brick outhouse were apparent prior to excavation, both as surviving foundations (layers 2 to 8) and as areas of paint on surrounding walls. This building rested on a metre or so of garden soil (layer 15) which had accumulated during the 18th and 19th centuries. Within this black soil were three small pits of late 19th century date (layers 13, 14, 16); two intersecting pits dating probably to the late 18th century (layers 17 and 24/5); a strip of rubble representing perhaps a short-lived boundary of late 19th century date (layer 26); a rubble deposit of *c* 1800 containing part of a millstone (fig 13) (layer 27); and, beneath the latter, a redeposited layer of white sand containing medieval pottery (layer 32).

At a depth of approximately one metre layer 15 gave way to various other layers including a spread of discontinuous grey clay (layer 21) and trampled chalk (layer 30). Spreads of brown/yellow clay (layer 19) and chalky mortar (layer 20) confined to the east of the trench were interpreted as levelling layers resulting from the sinkage of the underlying contents of a well (fig 5A). Centrally, an area of rubble (layers 51 and 31) proved to have resulted from the demolition of a malting kiln whose well-preserved remains lay beneath.

Along the north side of the trench the edge of an area of stone blocks (layer 35) and a chalk spread (layer 35A) were noted lying mostly outside the excavation. A similar, probably identical chalk spread was noted in Area 3. Time prevented the removal in full of all these deposits. Partial removal of layer 21 revealed a spread of brown clay (layer 64) cut by three post holes. Partial removal of layer 64 revealed part of a medieval structure of mortared stone (67), possibly a further kiln, lying mostly outside the area to the north.

To the south of the kiln partial removal of layer 30 resulted in further layers being glimpsed but time prevented further work here. A layer of grey sand containing medieval pottery (layer 66) was encountered above the natural sand in the few areas where this was reached. In Area 3 layer 66 was cut by a medieval pipe drain.

THE MEDIEVAL PERIOD

The earliest features found at 43 High Street are represented by the pipe drain in Area 3, the edge of a stone structure (67) in Area 1, a wall foundation crossing Area 2; and a spread of grey sand (layer 66) overlying the natural sand in Areas 1 and 3. For reasons given below, a layer of brown clay (layer 64) and the earliest phase of the kiln may also be attributable to the medieval period. It is quite possible that the well (99) may be medieval but nothing was found to support or disprove this. Other layers of probable medieval date were only briefly glimpsed in trial pits dug in the southern corners of Area 1. Slight traces of a late medieval building preceding the modern 43 High Street were found during the dismantling of no 43A.

Layer 66

This layer of grey sandy soil containing medieval pottery overlay the natural white or silver sand and probably extended across most of the area under examination. Opportunities to examine it proved limited. It was found around the stone structure (67) in Area 1 and in trial holes dug in both southern corners of the trench a similar layer was encountered. It was also present in Area 3. A single rim fragment of a shell-tempered cooking pot (fig 10:1) represents the earliest evidence of medieval occupation (there were also a few struck flints, which in Reigate are generally assumed to be mesolithic). This situation was similar to that at 16 Bell Street (Williams 1983). Otherwise the pottery consisted of a relatively dull collection of jug and cooking pot sherds, dateable only within wide limits to the 13th century (fig 10:2-14). The probable lamp base (fig 10:12) found adjacent to structure 67 may be singled out as a pottery form not previously recorded from Reigate.

Structure 67 (fig 4)

To the north of the kiln and extending beyond the excavated area was the foundation of a

structure of rough Reigate stone blocks, partly covered by layer 66. One complete side, the southern, was exposed. This measured 2.9m. The stonework on the east had been mostly robbed. Overlying this foundation was a thin scatter of stony grey sand (layer 75) containing a few sherds of medieval pottery. The shape and size of structure 67 and its close proximity to a known kiln of probable medieval date suggest that this is a further kiln, but until the area immediately north can be excavated there is little point in further speculation.

Other Medieval Layers and Features

The kiln itself will be described later on but the evidence upon which its suggested medieval origin hinges would be more appropriately examined here. Forming the surface of layer 66 to the north of the kiln was a thin spread of small stone fragments (layer 65) and immediately above that and covering feature 67 was a thick layer of brown/yellow clay (layer 64), which abutted the kiln on the north.

Layer 65 thickened considerably towards the edge of the kiln and appeared inseparable from the rubble forming the rear of the north wall of the stoking chamber. Layer 65 may then represent a deposit deriving from the construction of the kiln. Unfortunately incomplete excavation prevented this relationship from being secured and the interpretation must be regarded as unproven. Beneath layer 65 was layer 66, as just described, which contained medieval pottery. Above it the brown clay, layer 64, contained a single thumbnail-sized sherd of medieval pottery (since lost). The relationship between layers 65 and 75 (overlying feature 67) could not be determined and it may be that 65 derives in part from the demolition of feature 67. Any further evidence for a medieval origin for the kiln would have to await its re-excavation. However no evidence could be found to show that the kiln had cut through layer 21 (a spread of grey loamy clay overlying and occupying a similar area to 64) which will be shown to be no later than the early 16th century and the probability is that this had accumulated against the standing walls of the kiln.

It was not possible to trace the full eastern extent of layer 64 although it covered the area immediately north of the kiln. It had been removed along the north edge of the trench by a layer of rammed chalk (layer 35A, itself later than layer 21, fig 58) and was cut by three roughly square post holes (61-63) spaced about 2.3m apart and filled with brown soil. These had not been noticed previously but it is quite possible, given the circumstances of the later stages of the excavation, that they had been cut through layer 21. The post holes may possibly have belonged to a lean-to structure attached to the north wall of the kiln.

Layers similar to 64 and 65 were also noted to the south of the kiln in the southwest corner of Area 1 (layers 95 and 97 respectively). Here, layer 97 contained what appear to be three joining badly-warped waster sherds of a white ware dish (fig 10:16). No further similar sherds were found on the site and it would be quite wrong to suggest a nearby pottery kiln on this evidence alone. However, the presence of these sherds should be noted.

In the south-east corner of Area 1, above layer 43 (which may be identical to 66) a layer of tiles and stone was noted beneath layer 21 and assumed to be of medieval date (fig 5A).

In the west side of a late 18th century pit (24/5) a further sequence of deposits (tiles, burnt sand, stone, and grey sandy loam (probably layer 66)) was noted beneath layer 21. Once again time prevented exploration of these.

In the extreme southwestern corner of Area 1 a structure of coursed, unshaped blocks (98) was briefly exposed but not pursued due to lack of time. It may be medieval but this is not certain.

POST-MEDIEVAL FEATURES

Occupying an undefined area to the north and east of the kiln was a spread of dirty grey clay (layer 21). This terminated before it reached the eastern edge of the trench, south of the well, where it merged into a layer of chalk (layer 41). Again, time prevented its complete excavation and it was mostly only removed to the north of the kiln, where it was found to be of similar depth

(c 0.12m) to layer 64 beneath. Nothing was found within layer 21 to date it, but some small fragments of Tudor Green type pottery were found on its surface with a few small medieval sherds and a red ware base fragment. However, other layers associated with 16th century pottery overlay or cut into layer 21 (eg layers 20, 35A and 40), which suggests a date prior to c1500 for its deposition. The surface of layer 21 was not uniform. It contained patches of mortar and stone (eg layers 28 and 29) and may have formed the surface around the kiln until the kiln's demolition about 1700.

Along the northern side of Area 1, overlying and partly set into layer 21 was the edge of layer 35 (fig 4). This consisted of worn, sometimes shaped blocks of Reigate stone, brick, tile and chalk. Continuing this layer to the west was the southern edge of a layer of packed chalk (layer 35A) which filled scoops cut into the underlying layers 21 and 64. It is likely that this is the edge of a very similar deposit covering most of Area 3 to the west. In Area 3 two sherds of Raeren stoneware overlay this chalk suggesting a date prior to c 1500 for its deposition.

Occupying the area to the south of the kiln and ending in line with its east end was layer 30, another chalk layer containing two tiny red-ware sherds and two clay pipe fragments (fig 5B). This too had formed the ground surface contemporary with the demolition of the kiln. It was left mostly intact and its relationship with layer 21 was not determined.

On either side of the later pit 24/5 were two further layers, 22 and 40 which were similar and may originally have been continuous. Layer 22, a light grey loam in the extreme north east of Area 1 was partially excavated. It contained a small quantity of Tudor red ware sherds, a basal sherd from a Raeren mug, a few glass fragments and some residual medieval sherds. It overlay layer 20, one of the topmost layers filling the well (fig 5A). Layer 40, which was similar, overlay layers 35 and 21.

The Well (figs 4 & 5A)

The dismantled, filled-in remains of a stone-built well occupied the east of Area 1. Approximately half the circumference was present within the excavation. Unfortunately a large part of its contents was dug out without authority by irresponsible persons. Although it proved possible to record an almost complete section through these deposits after this regrettable event (fig 5A), the subsequent collapse of this section (which was caused by material from the well being piled above an already burdened vertical face) and the ensuing clearing-up operation were largely responsible for the abandonment of this end of the trench. Additionally it proved impossible to complete a full record of section A-B. Some, perhaps all, of the material found in digging out the contents of the well was recovered. The writer was also informed that the bottom of the well had been found at a depth of c 3.5m from the surface but due to the water table being reached this could not be verified. Priority was given to immediate backfilling for safety reasons. The well construction consisted of five visible courses of stone blocks (99) enclosing a sub-circular space. The construction trench contained almost sterile silver sand (44). The lowest filling (layer 46) consisted of layers of light grey and white sand with occasional charcoal flecks. It is thought that the bulk of the recovered finds came from this layer although some may have come from layer 47 above. Some may also have come from layer 43. Between layers 47 and 46 were thin bands of burnt earth (layer 45) and charcoal (layer 23), the latter sloping steeply upwards and visible to the south of the well, above the level of the surface of layer 21. Layer 47 was a mixture of brown and grey sandy loams with occasional charcoal lenses, and on the surface of this a further thin layer of pink ash and charcoal (layer 38). The remaining layers of filling, which were probably found necessary because of the settling of the contents of layers 46 and 47, will be described in ascending order.

Over layer 38 was layer 37, a thin deposit of grey soil and rubble containing a fragment of medieval window glass with a painted quatrefoil design (fig 13:1). Next came layer 20, which also overlay layer 21 (fig 4). This thickened considerably but ended abruptly and scarcely shows in

section B–C. It contained Tudor red wares (eg fig 11:35) and a few fragments of yellow-glazed West Surrey white wares held in a white rubbly deposit of flint, stone, tile and pink and white mortar. Next, layer 36, a dark grey loam with stone and tile rubble; layer 34, a grey sandy soil, possibly a water-laid deposit; and lastly layer 19, a brown/yellow clay with fragments of orange and buff roof tiles. This also directly overlay layer 20.

The construction date for the well remains in doubt. A date for the dismantling and filling is provided by the pottery from layers 46 and 47 (fig 11:19–34). This included sherds, some joining, of Tudor red ware bowls and other vessels, fragments of a yellow-glazed pipkin and a small green-glazed bowl of West Surrey white ware and the larger part of a brick cresset lamp (see separate report below). None of this material need be dated any later than the second half of the 16th century. Similar pottery was found in the top layers of filling which suggests, as would be expected, that the filling and levelling took place over a short period of time.

THE KILN, (figs 6–9, pls 1–3)

Introduction

The well-preserved remains of what was probably a malting kiln were discovered in Area 1. Almost the entire kiln was present within the excavation. Three or perhaps four periods of internal reconstruction were noted but, once again, time unfortunately prevented the full exploration of the earlier phases. Through the kind generosity of Rush & Tompkins Developments Limited and with the agreement of the site owners, Reigate and Banstead Borough Council, the kiln has been preserved beneath an access road for possible future excavation or presentation.

Because of the incomplete excavation and the consequent fragmentary knowledge of the earlier periods, it has been thought best to present this report in the manner of the excavation, that is with the latest phase first.

Description

The kiln as first seen (pl 1) was a simple rectangular structure measuring *c* 4.9m × 4.2m. A rectangular stone-walled sunken stoking chamber at the west end was separated from a higher circular brick-built kiln platform at the east end by a low brick wall, upon which were traces of a splayed opening. The kiln was covered with a layer of demolition rubble which is described separately below. The sunken stoking chamber measures *c* 1.9m × 1.4m internally. The north and south walls were of stone, the east of brick. The west wall had been robbed out since demolition but the remains showed that this had been of stone also.

Both north and south walls (53 and 54) bore evidence of reconstruction (fig 8). The original construction, which was better preserved towards the east, consisted of irregularly-laid finely-cut, blackened Reigate stone ashlar blocks set in yellow mortar (pl 3). To the west these had been replaced with later work of inferior quality consisting of rounded blocks of irregularly-sized Reigate stone bonded with brown clay. The remains of the west wall were bonded with a similar brown clay which contained a pin (fig 13:3). An ashlar block, lying where it had fallen on the floor, came presumably from the west wall. The floor (layer 60) consisted of a thin layer of coal dust and ash.

The east side was formed by a brick wall (74) on whose top surface lay the remains of the north side of a splayed opening. This led onto the kiln platform which consisted of a partially robbed brick floor enclosed within a circular brick wall bonded with pink mortar (pl 1). This brick floor lay on a mortar base overlying a thin bed of yellow sand which, in the western half of the enclosure, had been reddened by heat.

The circular platform was surrounded by a tightly packed deposit of stone and occasional brick and tile fragments set in yellow mortar. This obscured the junction of the brick (74) and stone (53 and 54) walls.

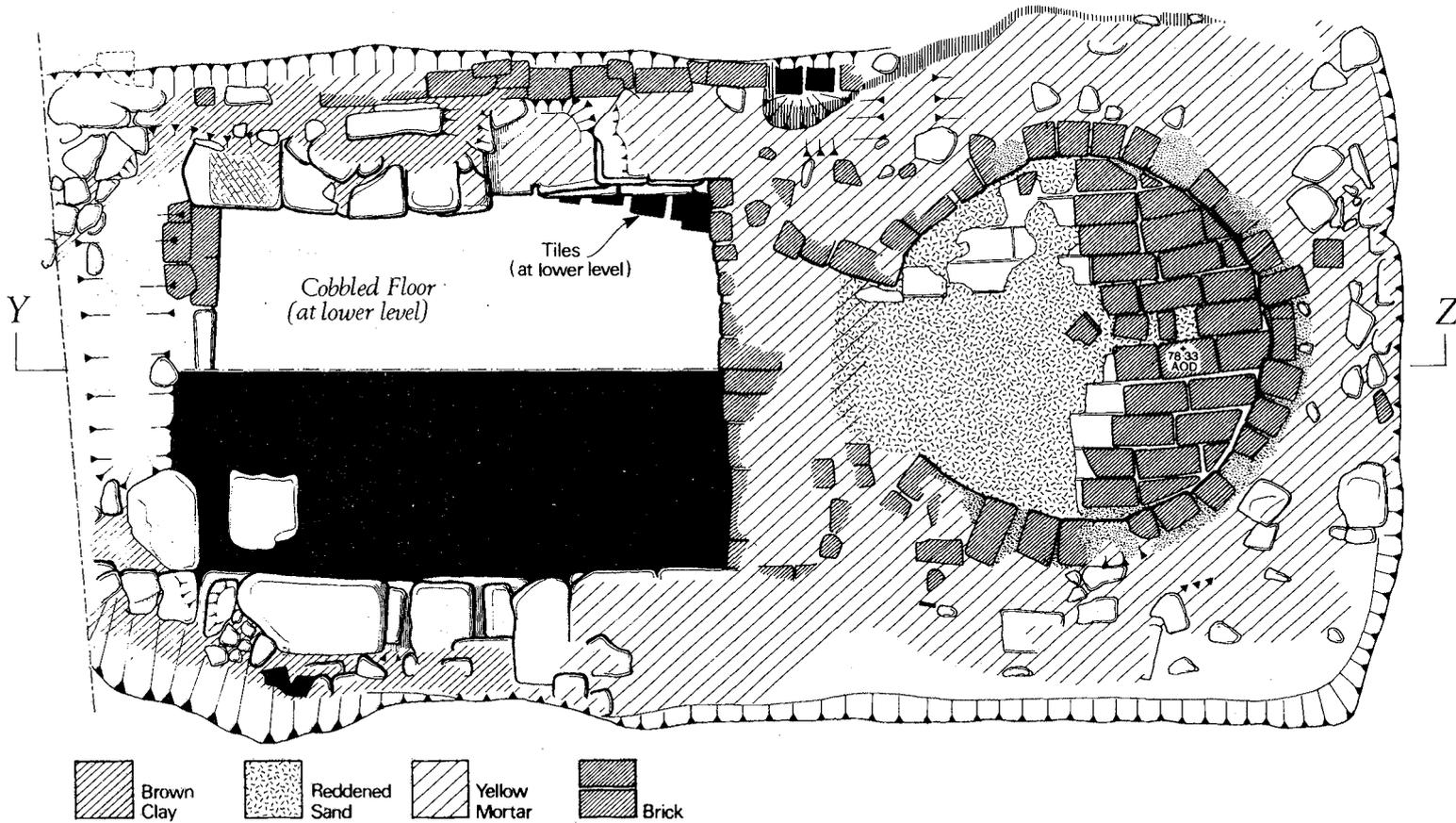


Fig 6A. 43 High Street. Plan of probable malting kiln.

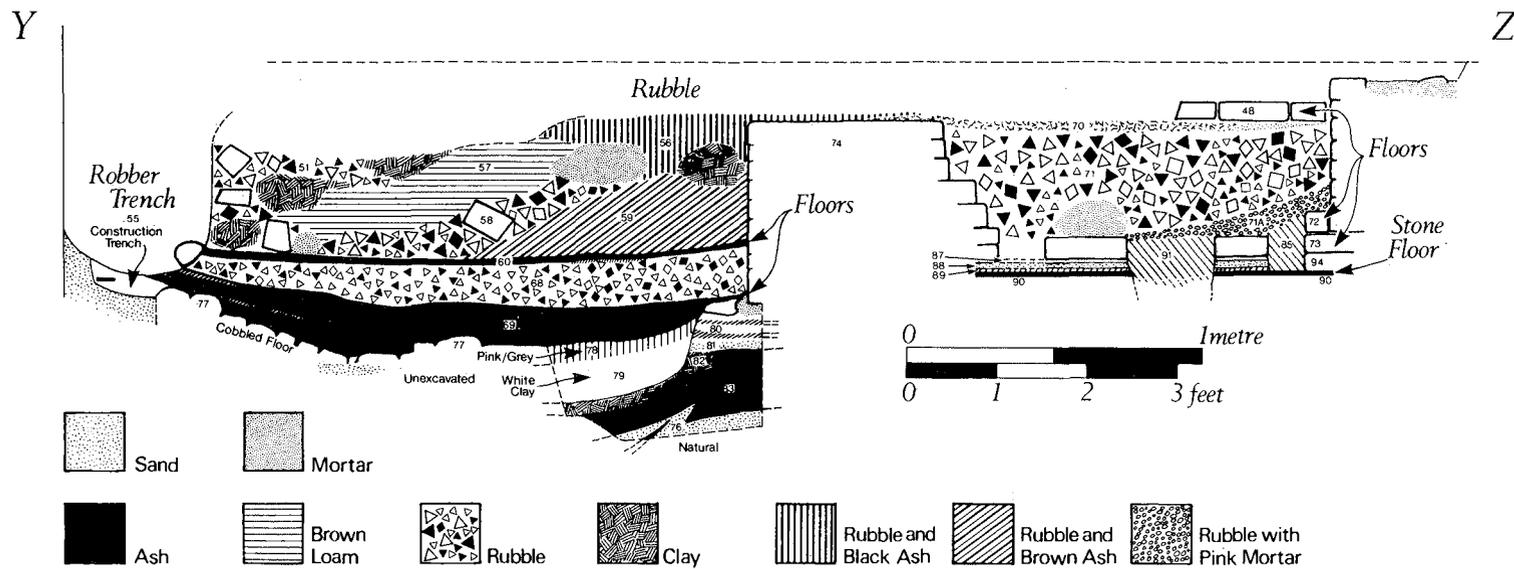


Fig 6B. 43 High Street. Section through probable malting kiln.

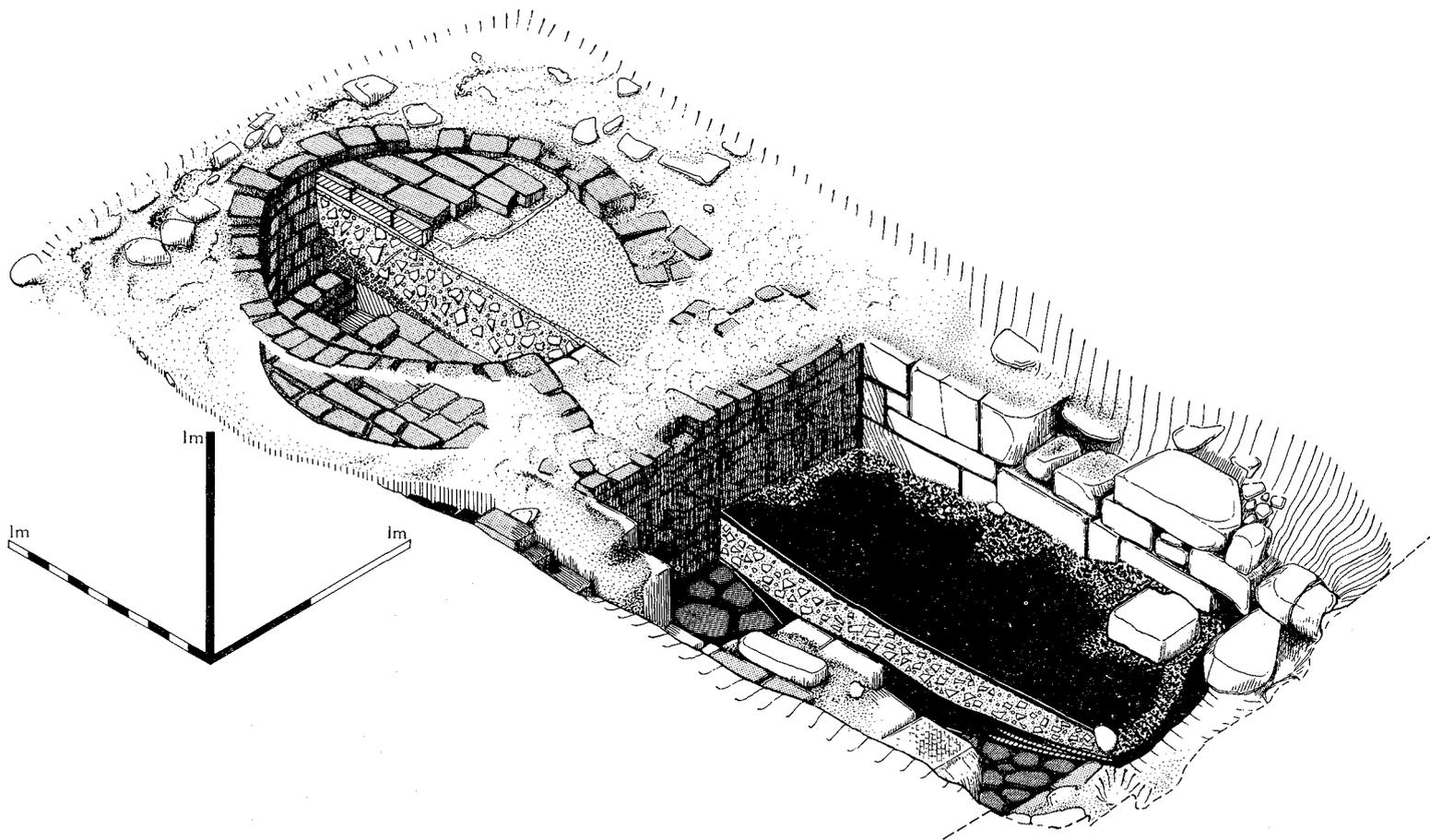


Fig 7. 43 High Street. Probable malting kiln. Isometric reconstruction.



Plate 1. 43 High Street. Probable malting kiln from northwest, as uncovered. Scale in feet.

Along the north side of the stoking chamber was a line of bricks and to the east of these, on the edge of the kiln, a shallow depression with two large tile fragments at its base. Around the southern edge of this depression was a white, lime-like deposit which curved sinuously to the east to form a northern edge to layer 52. Neither layer 52 nor these latter features could be further examined.

The demolished remains of the kiln were covered with various layers of rubble and earth contained almost entirely within the area of the kiln (fig 6B). In the southern half of the stoking chamber this rubble was removed as one layer but several distinct deposits were seen in section. These must have accumulated over a very short period. The lowest rubble layer which could be distinguished in section was layer 59, a mixture of large rubble and red/brown ash. This lay against the east, brick wall of the stoking chamber. Above, layer 58 contained more large rubble and lumps of mortar. This was followed by layer 57, a dump of sandy brown loam. Overlying wall 74 and extending into the stoking chamber was a deposit of rubble (layer 56) mixed with black burnt material and large lumps of raw yellow clay. The filling was completed with a final layer (31/51) of large rubble and clay lumps with smaller rubble towards the top and covering the remainder of the kiln. Other material from the general demolition included brick, tile and stone, pieces of sooted mortar lining, ironstone, further clay lumps, coal fragments and a few pottery and clay pipe fragments.

At some point, probably soon after the demolition, the west wall of the stoking chamber had been robbed of stone. This disturbance (layer 55) was backfilled with brown loam which contained a small amount of pottery and clay pipe fragments. The northern half of the interior of the stoking chamber and the complete brick kiln platform were removed.

Beneath the floor deposit of the stoking chamber (layer 60) was a layer of small rubble (layer 68) about 0.15m deep. This contained a few small clay pipe fragments. Layer 68 overlay a much thicker deposit of burnt material (layer 69) with further pieces of coal, pottery and clay pipe and bands of pink ash at the west end. Underneath this was a cobbled floor of worn pieces of Reigate

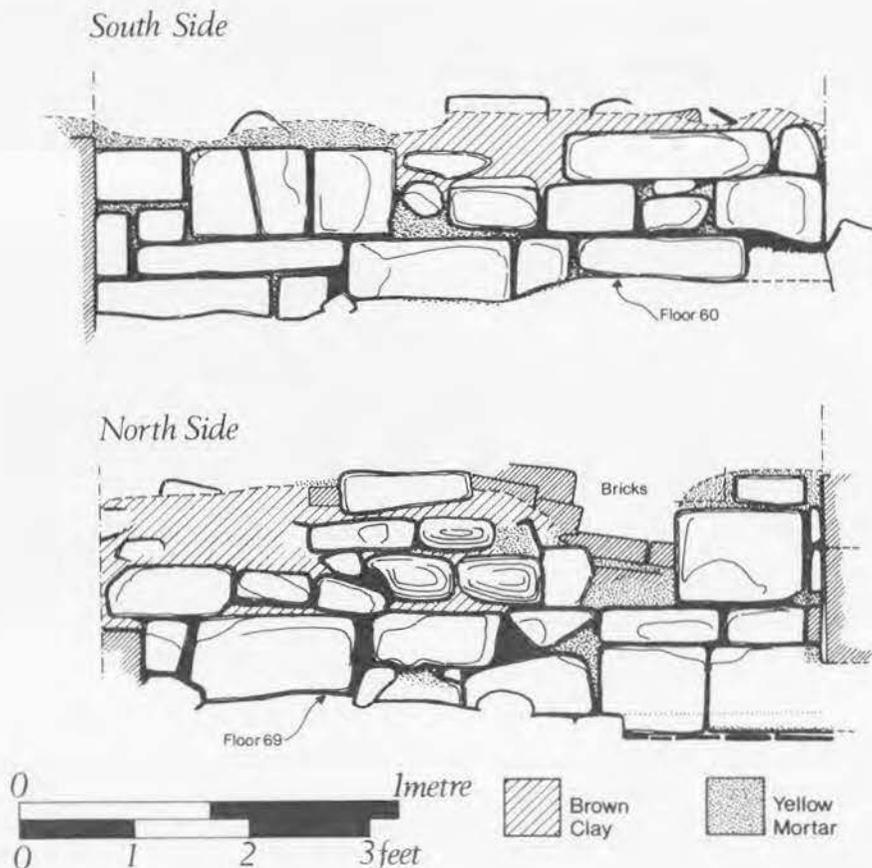


Fig 8. 43 High Street. Probable malting kiln. Elevations of north and south stone walls of stoking chamber.

stone, with a dished profile (layer 77). The floor was bordered to the west by a kerb of brick and stone. The removal of layers 60, 68 and 69 increased the visible depth of the northern wall which was found to rest on a line of tiles (84).

A test hold was dug in the north-east of the stoking chamber (fig 6B). This necessitated the partial removal of the cobbled floor (77). Immediately beneath was a layer of pink/grey material (78) which overlay a deeper deposit of white, clay-like material (79). These two layers had clearly cut a further sequence of deposits which continued beneath the brick wall (74). These comprise, from top to bottom, bands of pink ash (80); silver sand (81); brown sandy clay (82); a thin black layer (charcoal?) (83); and white sand (76), presumably, but not certainly, natural.

Removal of the brick kiln floor (48) and the underlying sand (70) revealed the circular enclosing wall continuing beneath the level of this floor as a brick cylinder. At its base were the remains of two more brick floors (figs 7 & 9). The intervening area, up to layer 70, was filled with a brick rubble containing a few clinker-like lumps and a thinner deposit of pink, stony rubble occupying the east half of the area and tailing off to the west (layers 71 and 71A). The brick wall (74) which was found to be c. 0.65m wide at the top was stepped outwards and downwards and was keyed into the circular wall (pl 2).

Neither of the two lower brick floors had survived intact (fig 6B). Floor 72, the uppermost, survived mostly around the periphery, butting against the enclosing wall. Beneath was floor 73.

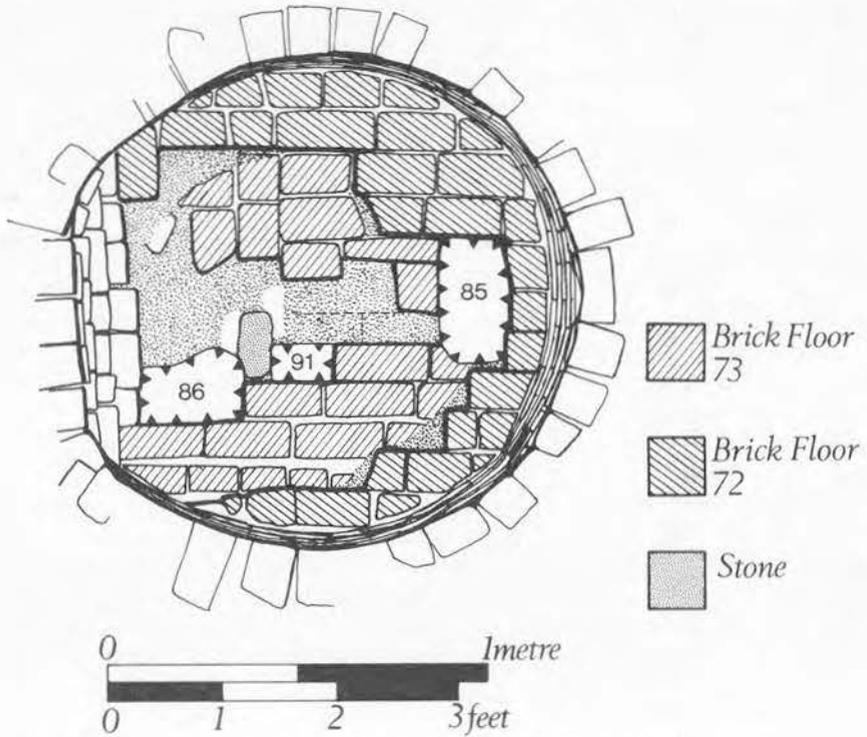


Fig 9. 43 High Street. Probable malting kiln. Plan of kiln floors after removal of brick floor (48).



Plate 2. 43 High Street. Probable malting kiln, showing Period 2 kiln platform and Period 3 brick blocking wall keyed into earlier circular brick kiln wall. Partially visible through the hole in the brick floors is the Period 1 stone floor (90). Scale in feet.

This had survived better but was also robbed out in the centre where it was replaced by a spread of mortar and one or two stone fragments. Floor 73 underlay the base of the enclosing wall, six courses of which had survived. A further layer of bricks (94) lay beneath floor 73. This seems to have been confined to three straight sides on which the circular wall was built. Three holes had cut through these two brick floors which enabled the underlying layers to be glimpsed (fig 9). On the east of the circular area a hole (85) had cut through floors 72 and 73, revealing beneath 73 a thin layer of mortar (87), a thin layer of unreddened sand (88) and a layer of stone chippings of similar thickness (89). The hole 85 was $c 0.34\text{m} \times 0.18\text{m}$. Together, these 3 layers (87–89) were the same depth as the bricks forming 94. At the bottom of 85, which was filled with a grey, gritty material, was visible the top surface of a stone floor (90) attributed to Phase 1. The hole 86 had cut through floor 73, was filled with rubble (71) and also revealed a stone surface. The third hole 91 also cut floor 73 and penetrated the underlying stone floor (90). It was possible to do no more than prove the existence of an earlier phase or phases and with a time limit and the possibility of preservation in mind further dismantling was not possible.

Beneath the kiln floor (73) a stone floor (90) was glimpsed. This had a smooth, blackened surface. Vertical joints were visible. A small hole (91), cut from above floor 73, had made a narrow slot through the stone floor. This had probably been done with a pickaxe. This hole was filled with a similar material to that in hole 85. Just visible at the base of this slot (not shown on the section fig 6B) was a deposit of reddened sand (92) with possibly more stone beneath (93), but the slot was too narrow to be certain. Part of the southern half of floor 73 was removed to view a larger area of the stone floor, but before this could be photographed the excavation was unexpectedly backfilled by the demolition contractors.

Dating and Discussion of Phases

Phase 1 (?medieval to 17th century)

Evidence for a possible medieval origin of this kiln has been given above. No evidence was found to show that the construction of the kiln had cut through any of the surrounding clay layers (eg 21 and 64 etc) which had probably been deposited against an already standing building. The earliest features found comprise the stone floor (90), the succession of deposits beneath floor 77, one of which, layer 82, contained a single sherd of sandy grey ware and, most likely, the ashlar construction of the north, south and west walls of the stoking chamber. Until further excavation can take place it will not be possible to say what form this earliest kiln took. Neither is it possible to assign a date for the construction of the kiln any closer than $c 1250\text{--}1500$.

Phase 1A

No evidence was found to date any of the kiln's subsequent alterations to a period earlier than the late 17th century, but it seems probable that the stone north, south and presumably west walls of the stoking chamber were reconstructed earlier than this. Given the substantial nature of the surviving parts of the original ashlar block walls it is difficult to see why a reconstruction using inferior materials should have been necessary. The single bronze pin (fig 13:3) found in the clay bonding of the west wall is not closely dateable. However, given the long time bracket, a date in the 16th century would seem reasonable for this phase.

Phase 2 (late 17th century)

This phase involved the construction of a new, circular kiln platform at the east end to replace the earlier (?rectangular) stone one. Floors 72 and 73 enclosed within the brick cylinder (49) belong to this phase. The brick foundation course (94) supported 49. No evidence has yet been found for the form of the stokehole. The area to the rear of 49 was filled with a stone and mortar mixture at this time, to act as a foundation for the new superstructure.

The cobbling (77) formed the contemporary floor in the stoking chamber, though the floor may



Plate 3. 43 High Street. Detail of ashlar blocks of Reigate stone forming part of the south wall of the Period 1 stoking chamber. Scale in inches.

be earlier. Over the cobbling had formed a thick deposit of burnt material (69) containing some tile fragments, two burnt sherds of green-glazed, west Surrey white ware and a few clay pipe fragments dateable to the late 17th century (eg fig 20:1, 2).

Phase 3 (late 17th century)

This final period of reconstruction was confined to the raising of the floors of both stoking chamber and kiln platform. It involved the demolition of whatever arrangement had existed for a stokehole, the construction of a wide brick wall between stoking chamber and kiln platform and the keying of this into the circular wall. The two brick floors (72 and 73) had meanwhile been partly removed (from the west, by a person standing within the stoking chamber) and a hole had also been made, evidently with a pickaxe, in an apparently idle attempt to discover what lay beneath. All three disturbances (85, 86 and 91) may have similar origins. The resulting circular hollow was then filled with a mixture of rubble (71 and 71A) and a new floor (48) laid out above this on a bed of sand, level with the top of wall 74, which served as the base of a stokehole opening of which traces of one splayed side were visible. Contemporary activity within the stoking chamber involved the deposition of a layer of rubble (68) above layer 69 and against the surface of wall 74. The surface of layer 68 provided a heightened floor on which had accumulated a further layer of burnt material, coal dust and ash (60), though not nearly so much as that above floor 77, testifying perhaps to a short life between reconstruction and demolition.

The only dateable material from Phase 3 came from layers 60 and 68. Clay pipe fragments and a tiny sherd of plain delftware from these layers again suggest a date towards the end of the 17th century.

Demolition (c1700)

If the difference in depth between layers 60 and 69 can be used as evidence, then the kiln saw little use between reconstruction and demolition. This involved the removal of the superstructure of the kiln to the level of the contemporary ground surface. The dumped rubble contained part of the base of a Westerwald stoneware tankard (fig 12:37), part of the base of a west Surrey white ware vessel with a speckled red glaze, an undateable red ware sherd, a sherd from the upper body of a further red ware vessel with an applied design (fig 12:36), and a complete bowl and other fragments of Type 19 clay pipes (c1680–1700). The manganese colouring on the stoneware sherd was not introduced until after c1680. The white ware fragment is also indicative of a 17th century industry. This evidence again suggests a date in the last quarter of the 17th century and probably close to 1700 for the demolition.

Later robbing

At a date subsequent to the demolition the remains of the west wall of the stoking chamber were robbed of stone, just when is uncertain. The robber trench contained sherds of cream ware (late 18th/early 19th century), two sherds of delftware, a pipe bowl of Type 19 (1680–1700) and a glass bead (fig 13:5). The upper levels may have been disturbed.

Discussion and Interpretation of the Kiln

Although no close parallels have been found for the kiln, the lack of any industrial waste and the substantial documentary evidence to show brewing activities on the site since at least the late 16th century lead inevitably to the conclusion that it was used for malting or just possibly for drying hops. Little seems to be known (and apparently even less published) about the English brewing industry before the late 17th century other than that, as in this case, it was a small-scale backyard business passed on from father to son or daughter.

In this discussion the writer is painfully aware of his lack of authority on the various processes and structures employed in brewing and must express his gratitude to Amber Patrick, chairman of the Nottinghamshire Industrial Archaeology Society, who has considerable experience of maltings mainly from the late 18th to the 20th century and with whom he has corresponded at length. Miss Patrick has contributed most of the information used in the following discussion as well as the glossary of brewing terms.

Of the many processes employed in brewing before the final product is achieved the one which most concerns us here is malting. Malt is germinated grain (usually, but not always, barley) with germination arrested at a critical point in order to conserve the starches and proteins which have become soluble during growth. When water is added at the beginning of the brewing process the starch is converted into sugar by malt enzymes and the resulting liquid is called wort. When yeast is added to the wort it feeds on the sugars and amino acids, multiplies and produces alcohol and carbon dioxide. The end product is beer. Once germination has started the grain is spread out to grow; this is the reason for the distinctive shape of surviving (mostly 19th century) maltings which are generally long, fairly low buildings with a kiln at one end or at right angles to the main building. To maintain regular growth an even temperature is required and so the windows in the earliest surviving maltings tend to be small, sometimes little more than slits. Another way of ensuring an even temperature was to make the bottom floor a basement, and this was a common feature of maltings. When the grain had grown to the required extent it was kilned. This arrested germination and removed the moisture which needed to be low for the ensuing grinding in the maltmill. Normally, malting being a continuous process, one would expect the kiln to have been enclosed within the malting rather than a freestanding structure and there is no clear evidence to show that this was not the case with the High Street kiln.

The term 'malting' occurs three times in the surviving documents quoted from above, in 1688, 1717 and 1786 but there is no reference to a malt kiln. However these terms are frequently

interchangeable. In the case of a malthouse the term would mean that the entire process of malting would have been carried out in that building, but mention of a malt kiln would not necessarily mean that there was just a kiln for drying the malt. Indeed as Miss Patrick points out, where she has been able to link a documentary reference to a malting kiln with a standing building, that building has always turned out to be a full malthouse.

It has not been possible to make other than a general statement on the likely form of the superstructure of the kiln. At some point above and out of reach of the fire the germinated grain would have been spread on a perforated platform. Mathias (1959) and Bolton (1960) both state that in earlier kilns this was often a cloth of horsehair. Marshall (1798) states that the use of a haircloth had become general by the late 18th century. Stopes (1885) describes it thus: 'It is a stiff woven horsehair with a coarse mesh. It is secured in the kilns to boards fastened to the walls and rests upon spines of wood placed somewhat closely together, resting upon main carriers or bearers. This type of floor promises to become as rare as the use of perforated boards for the same purpose'. The horsehair cloth would have been partly replaced towards the end of the 17th century by wire frames or by pierced, cast-iron plates, as noted by J Mortimer in 1707 (Mathias 1959).

The distance between the furnace and the floor appears not to have been recorded, although a distance of five feet is mentioned by Reynolde Scot writing in 1574 of his hopkiln (Cronk 1978, 102-3). Mathias (1959, 407) gives this dimension as nine feet in the malting kiln of the 'modest brewery' of Benjamin Wilson at Burton on Trent in 1798. However, by this time the brewing industry was a much larger enterprise and the kilns had consequently grown in size (sometimes being 30' x 18') so the dimension may not be relevant. In the case of the Reigate example one might expect the loading to have been carried out by a standing person and perhaps a distance of some three to four feet between furnace and floor might be suggested.

There remains the problem of how sparks from the furnace were prevented from setting the load alight. Mathias (1959, 411) mentions the use of a 'spark stone', apparently set between furnace and floor as a preventative measure. Reynoldson (1808, 80-1) implies that the furnace was not centrally placed beneath the drying floor, perhaps also with this purpose in mind. At the High Street kiln there was evidence that the fire had been located mostly within the stokehole: the sand (layer 70) beneath the brick floor (48) had not been burnt red to the rear of the enclosed area.

The writer has attempted to search for parallels to the kiln, but the references to malting kilns are widespread throughout the literature. None of the examples of which he is aware provide help in determining the external appearance of the Reigate kiln in its later periods. Bolton (1960) illustrates a much larger kiln (23' x 14' approx) with a rectangular stokehole leading to a smaller, rectangular stone kiln with sides sloping outwards and upwards. Examples have also been found in recent years in Chester both on the Princess Street site (Ward 1981) and at Crook Street (Strickland 1974). The latter kiln, a stone-built, 18th century example, bears a superficial resemblance to the High Street kiln but the rectangular stoking chamber is separated from the circular kiln by a long stone flue. Strickland suggests (pers comm) that the fire in this kiln was lit in the entrance to the flue, some five feet away from the 'vent' area. The stoking area was sunk some five feet below the contemporary ground level.

In its 17th century phases the Reigate kiln seems to have been coal-fired. As noted above, the earlier phases suggest the use of charcoal as fuel for the furnace (see Cronk 1978, 109 for comments on the use of charcoal in hop kilns). Mathias (1959, 412) usefully states that mineral fuel had been coming into use for malt furnaces from the mid 17th century. As early as 1693 there is a reference to 'coaks' made from coal being used to impart a clearer taste to the final brew which resulted from a reduction in the smoke produced in the furnace (see Microfiche for note on coal analysis and origin).

As a concluding possibility it remains to consider that the kiln, in its final phases at least, may have been used to dry hops. The quoted document of 1717 mentions an oasthouse specifically.

The archaeological evidence would not rule out categorically a date after 1717 for the kiln's demolition. In this context, Hooper (1940, 97–8) is most enlightening. Hooper quotes 16th and early 17th century documents which specify hop grounds in the locality and states that 'even in the town oast houses could be seen and back gardens were in some cases given up to hop growing', although he does not give his reasons for this statement. Hooper goes on 'In 1615 Allen Venne was ordered to remove his "oste" from under the house of his neighbour, Thomas Cole, to whom it caused annoyance'. It should be remembered however, as Cronk (1978, 100) points out, that the term 'oste' was originally applied to kilns for drying malt and that when hops were first grown in England they were sometimes dried in pre-existing malt kilns.

In external appearance and in internal arrangements there cannot have been much difference between a malting kiln and a hop oast at this period and the latter provides an alternative interpretation for this well-preserved kiln.

GLOSSARY OF BREWING AND MALTING TERMS USED IN THIS REPORT

| | |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Back</i> | traditional brewing term for a vessel |
| <i>Brewhouse</i> | building(s) in which the brewing took place, ie a brewery. |
| <i>Copper kettle</i> | copper (or now stainless steel) vessel in which wort is boiled with hops to give beer its bitter flavour. |
| <i>Gyle tun(ne)</i> | fermenting tun. |
| <i>Malthouse</i> | building(s) where the malting process was carried out, including the kilning. |
| <i>Maltmill</i> | 'machine', ie mill which crushes/grinds malt into grist (ie ready for mashing) |
| <i>Mashing</i> | Mixing together grist and hot water at precise temperatures to form and extract malt sugars which the yeast will eventually ferment. |
| <i>Mash tun(ne)</i> | vessel in which mashing takes place and in which wort is separated from the spent grains. |
| <i>Millhouse</i> | building (or room) housing the malt mill. |
| <i>Sweet wort</i> | unboiled wort before the addition of hops. |
| <i>Under back</i> | vessel, usually below the mash tun, which collects wort during sparging (spraying hot water over mash in the mash tun to ensure complete extraction of malt sugars). |
| <i>Wort</i> | A sugary extract of malt |

LATER FEATURES

These can be dealt with briefly. Covering all those layers and features mentioned above was a build-up c1m thick of brown garden soil (layer 15) containing mostly 18th and 19th century material, very fragmentary and mostly of little interest. A layer of similar but more compact loam (18) was noted below 15 in the east of Area 1 and it seems that this had accumulated before the bulk of layer 15.

Overlying 18th century pottery in the north west of the trench was a layer of white sand. This contained medieval pottery including sherds of a notable Earlswood-type jug with stamped rosettes, relief scallop shells and combed lines (fig 10:15). This is clearly redeposited material. Over this was a layer of rubble dating to c1800 (layer 27) (fig 4). This sloped downhill to the south for about 4m. It contained little noteworthy but mention should be made of part of a lava millstone (fig 14), special purpose bricks (triangular, and one with a U-shaped notch cut out), a fragment of dressed stone, pottery and glass.

In the northeast of the trench were two intersecting pits, 17 and 24/5 (fig 4). Pit 17 contained a mass of broken window glass in small pieces. This proved difficult to excavate but seemed to have been cut by a further pit containing layers 24 and 25. Both pits were c 0.8m deep. The latter pit contained two distinct deposits. The lowermost (25) contained part of the base of a late type

Westerwald stoneware tankard (fig 12:38), tile fragments and bone, including a duck's bill, all held in a powdery brown deposit. Layer 24 contained sherds of 16th century Raeren mugs and probably represents material dug out when the pit was cut. Both these pits date to c1800.

Victorian and later features will not be dealt with here.

The Excavation

Area 2 (figs 2, 19; fig 19 is on Microfiche 11)

Following the dismantling of the 17th century house, no 43A, by the Weald and Downland Open Air Museum the opportunity was taken to conduct an excavation beneath the floor of its cellar. Originally, a 1m wide trench was cut across its floor by David Bird revealing the foundation of a substantial wall on a north-south alignment. Later it proved possible for the Holmesdale Archaeological Group to expand on this work and approximately two-thirds of the floor area was eventually removed in a day's work.

The floor lay on a thin spread of grey sand overlying natural white or silver sand. This contained a few small medieval and later sherds and part of a bone comb (fig 13:2). Into the natural sand had been cut a foundation trench (6) packed with rough blocks of Reigate stone and a few medieval sherds. This wall was traced for a distance of 3.8m (see also fig 2). The depth of this wall from the level of the High Street (not actually determined but about 2m) suggests that it may be part of the foundation of a medieval undercroft.

Other features found included a small area of cobbling (3) overlying wall 6, a line of bricks (4), probably the base of a partition wall associated with the upstanding building, a possible post hole (5), two features filled with sand containing fragments of 18th and 19th century glass (1 and 2), and a small scoop with charcoal (7).

Once the timber frame of no 43A had been removed, the opportunity was taken to examine the tops of the stone walls of the cellar. The ledge upon which the floor joists had rested contained a number of small objects, mostly of 19th century date. These included most of a Chinese porcelain cup, a variety of beads in different shapes and colours, many pins, a miniature lead spoon, buttons and fragments of fans and jigsaw puzzles (fig 13:8-13).

The Excavation

Area 3 (figs 2 & 5B, pls 4-6)

Following demolition of the Public Hall, an area between it and Area 1 was stripped by machine to a depth of c1.2m. This included part of an adjacent property not scheduled for redevelopment and whose original level was eventually reinstated. This whole area, which was threatened with imminent destruction the following day, was briefly examined.

The north-south section exposed by machine (fig 5B:EF) showed that mostly topsoil had been removed. Cleaning back from this face in two rough strips approximately 1.5m wide, a layer of flint and chalk was traced for a distance of c7m (area of tone on fig 2). Overlying this was the remains of a spread of yellow/grey sand containing a few sherds of late medieval pottery, thin and unglazed, and two sherds from the upper half of a Raeren stoneware mug of c1500. The northern half of this area had been heavily disturbed by modern pits. The area to the west was effectively delimited by the site of the Public Hall whose construction had removed all earlier levels. The layer of flint and chalk is thought to be identical to layer 35A in Area 1.

Prior to this excavation, in early 1981, fragments of a straight-sided pottery object were found lying on the surface above Area 3, provoking much speculation. During the latter half of the single day's work on this area a pit was located. This had been dug by the site engineer in 1980. The backfill contained further broken fragments of similar objects which were identified as water or drain pipes (see separate report). Complete removal of the backfill revealed the broken ends of the interrupted line *in situ*. Rapid clearance then exposed the line of pipes running north-south

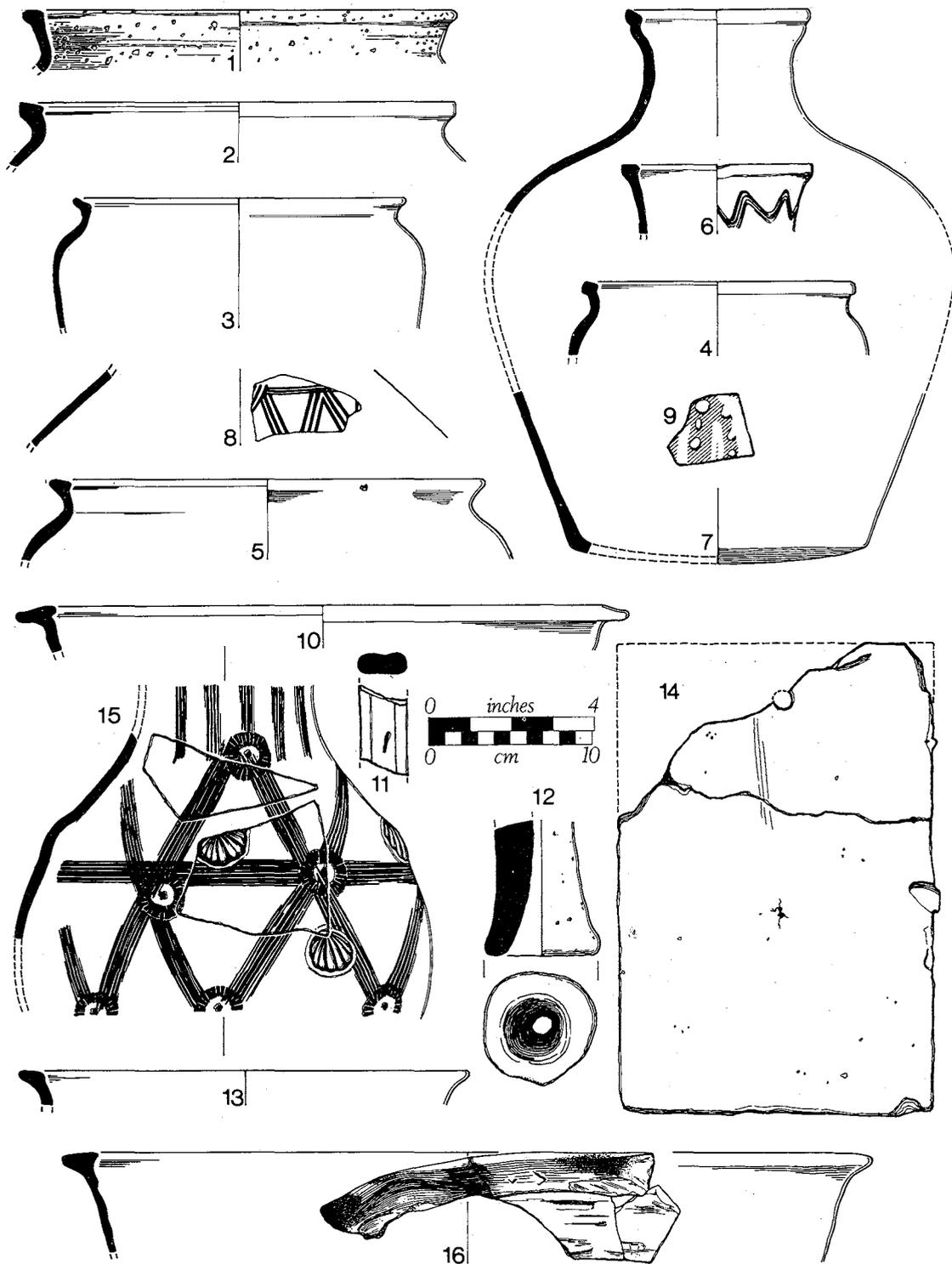


Fig 10. 43 High Street. Medieval pottery and tile 1-16. (1/4)

downhill across the site (fig 2). These had to be photographed and removed that afternoon in view of certain destruction the following morning (pls 4–6). Some weeks later with construction well under way, the line was traced south to its terminus. In constructing the line the pipe layers had cut through a layer of grey sand containing 13th century pottery and tile. This can be identified with layer 66 in Area 1.

The pipes had been laid in a gently curving line on a bed of yellow clay which had also been used to seal the joints. Nearing the southern end the line had been badly damaged by the layer of chalk and flint which had the effect of separating the bulk of the line from its final component, a fragment, attached to which was a perforated lead cover (fig 16), forming the terminus of the line. A stone structure was glimpsed just beyond but time and the proximity of plant prevented further work. No evidence was seen for a sump or ditch into which the pipeline would have drained but this is not to say that it had not existed.

Beyond the engineer's test pit the northward continuation of the line had already been removed by machine prior to the discovery of the remainder.

Layer 66 in Area 3 contained a considerable quantity of roof tile fragments, some of which joined (fig 10:14). Sherds of a jug (fig 10:7) were found around the southern terminus of the pipeline.

Observation

Area 4

Observation of earthmoving and construction trenches after the demolition of 45–51 High Street failed to provide evidence of occupation earlier than the 18th century. No structures other than brick soakaways were noted behind the demolished building and only very occasional thin layers of chalk broke the build up of brown loam. In the north west corner of Area 4, to the front of buildings which had been set back from the street, an east-west section was briefly exposed. Two deposits were noted. Above the natural sand a thin band of brown, sandy loam (c 0.2m) with gravel at its base ran uphill to the north. Above this was a thick (over 1m) deposit of rubble. The loam may represent a medieval soil but further examination was not possible. Only a photographic record was made.

The Finds

MEDIEVAL POTTERY AND TILE (see Microfiche 2–3)

Layers 66 & 43 (fig 10:1–14); layer 32 (fig 10:15); layer 97 (fig 10:16).

The small amount of medieval pottery from this site is typical of material from other sites in the town. Of interest are the cresset lamp base (12), the decorated Earlswood type jug (15) and the roof tile (14) which contains fossils indicative of a source in the Gault Clay. The warped bowl (16) may be a kiln waster.

POST-MEDIEVAL POTTERY (see Microfiche 4–5)

Layer 96 (fig 11:17,18); layers 46/7, well filling (fig 11:19–34); layer 43 (fig 11:35); layers 56–9, kiln demolition (fig 12:36–7); layer 25 (fig 12:38); layer 15 (fig 12:39); layer 27 (fig 12:40).

ANIMAL BONE

The small amount of animal bone from this site, with the exception of that from layer 15 has been retained but has not been studied.

THE ANALYSIS OF COALS FROM THE MALTING KILN

A report by A H V Smith, National Coal Board, Yorkshire Regional Laboratory, is on

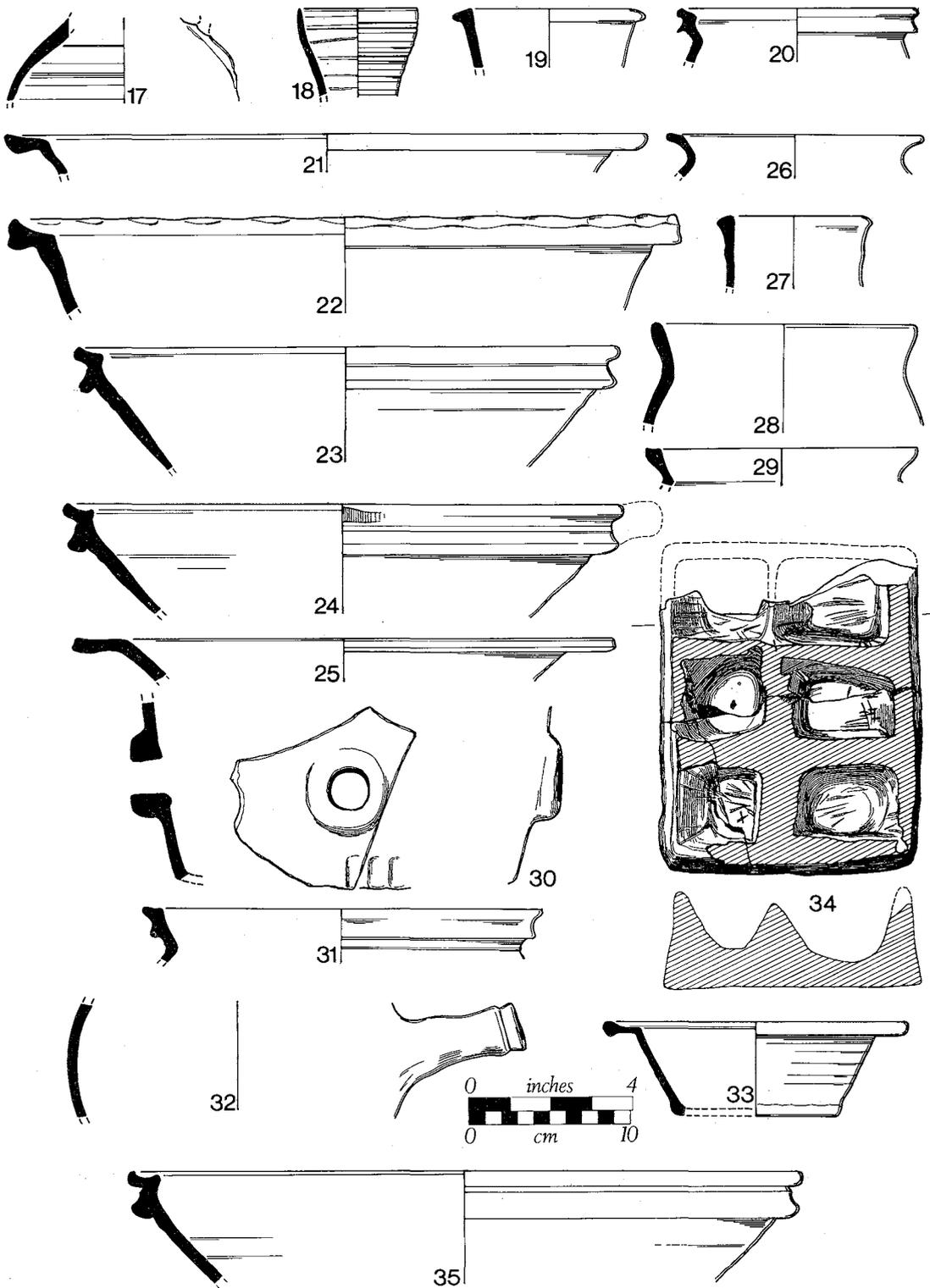


Fig 11. 43 High Street. Post medieval pottery 17-35. (1/4)

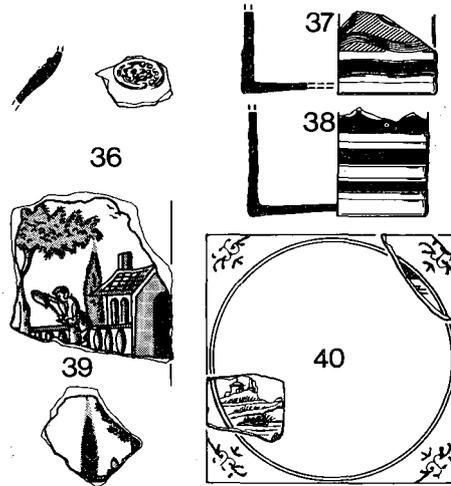


Fig 12. 43 High Street. Post medieval pottery and tile 36-40 (1/4)

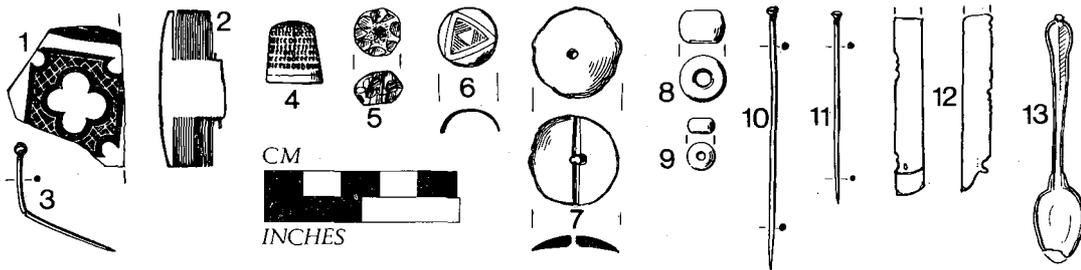


Fig 13. 43 High Street. Small finds (1/4)

Microfiche 7-10. He concludes that some, and possibly all, of the coal from the malting kiln originated from the Durham Coalfield.

THE SMALL FINDS (fig 13)

1. Fragment of window glass, now opaque, with quatrefoil design painted in deep red. This was submitted to Mr D M Archer of the Victoria and Albert Museum, in whose opinion the glass is likely to date to the 14th or 15th centuries and may be part of a border or an architectural setting for a figure. (Layer 37, top filling of well shaft)
2. Fragment of bone comb. (From beneath basement floor of no 43A, Area 2)
3. Copper alloy pin. Looped wire head. (From clay bonding of robbed west wall of kiln)
4. Copper alloy thimble. (Layer 19)
5. Clear glass bead. (Layer 55)
6. Hollow, copper alloy button. (Layer 55)
7. Pipeclay ?button. (Layer 15) See Higgins, below.
- 8-13. Objects found during dismantling of no 43A. These include glass beads 8,9 (examples); copper alloy pins 10,11 (largest illustrated out of a greater number); fan sticks, 12; and a miniature lead spoon, 13.

MILLSTONE FRAGMENT (fig 14)

This was found in layer 27, a spread of building rubble, pottery and glass which dated to c1800.

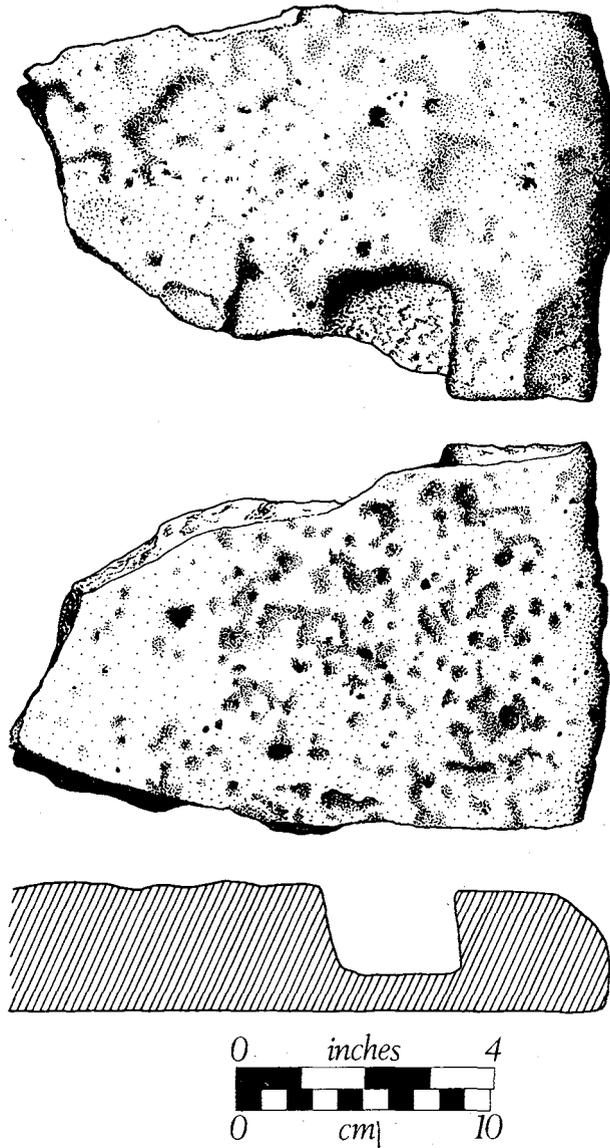


Fig 14. 43 High Street. German lava quern. (1/3)

The millstone was submitted to R W Sanderson of the Petrology Unit, Institute of Geological Sciences, to whom I am grateful for the following identification. Mr. Sanderson comments: 'This is a dark grey, moderately finely scoracious basaltic lava with sparse hornblende phenocrysts. This is undoubtedly . . . an example of the German Niedermendig millstone lava — a tephrite rather than a basalt in the strict sense'.

I am also indebted to J Kenneth Major who examined a drawing of the stone, for the following comments: 'My reading of the fragment is that it was part of a rotary quern and was indeed the upper or runner stone of the pair of stones. It would appear that its original diameter was probably between 24 and 30 ins. The hole on top of the stone was used to attach a handle. This could have been no more than a loosely inserted stick of the right thickness. The stone also

appears to be very worn. To have a thickness of only 2 inches implies a very considerable use. The holes in the grinding face do not differentiate between the blow holes of the lava and the natural pitting which the stone has acquired in use. The great advantage of the Niedermendig stone is that it is like *Aero* chocolate; as you wear through one set of holes the next holes are there. This porosity is of considerable advantage in preparing meal. One thing is certain and that is the fragment was long out of use before 1800. It would have no connection with brewing as these stones are not known to have been used in malt mills. My guess, and it can only be that, is that this is a medieval quern which after it was accidentally broken was found and used as a building stone'.

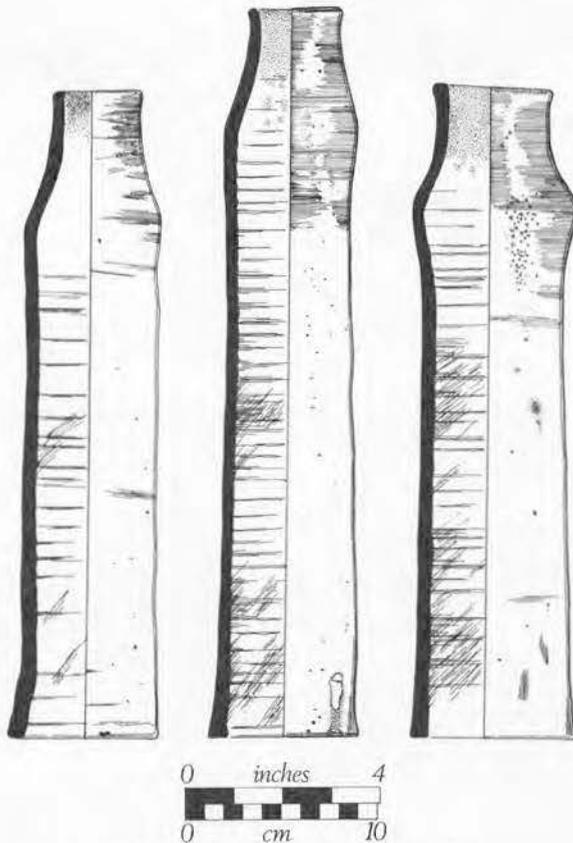


Fig 15. 43 High Street. Examples of medieval drain pipes. (1/4)

THE MEDIEVAL PIPELINE (figs 15-17 and pls 4-6)

Description

Twenty five complete or almost complete pipes were recovered along with fragments of about six others. The line survived to a distance of c10m; its original length is not known. The individual pipes differed considerably in form (fig 15) but there is no evidence to show that this was intentional.

Preservation was generally good but towards the south end of the line some pipes had been crushed and squashed into their clay surround. Each pipe contained a sediment of c 1cm of grey clay-like material. Few fragments of the pipes cut by the engineer's pit could be re-assembled.

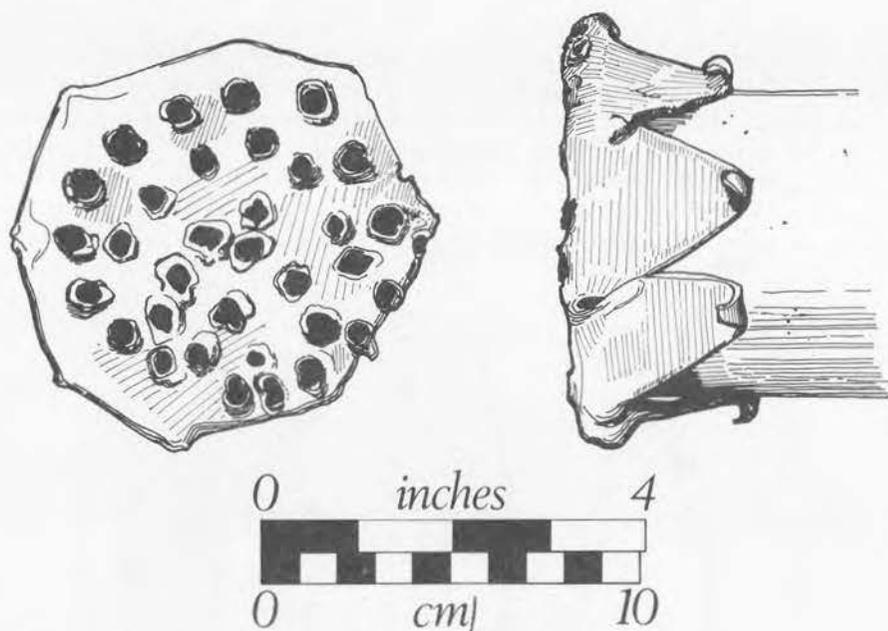


Fig 16. 43 High Street. Perforated lead terminus of drain pipe. (1/2)



Plate 4. 43 High Street. Medieval pipe drain in situ. North to left. Scale in feet.

The average length was 35.5cm with extremes ranging from 33cm to 41cm. The wide end varied from 5.4cm to 6.6cm internally and the narrow end from 3cm to 4.8cm also internally. Fig 15 shows the extremities in the forms.

The pipes are made in a fine sandy orange fabric, oxidised, of Earlswood type. The surface is occasionally dark grey but this can merge into orange on the same pipe. Clear glaze is used very sparingly only on the inside of the narrow ends. One pipe bears a kiln scar on its wide end. This



Plate 5. 43 High Street. Medieval pipe drain after salvage excavation, looking north. The break in the line caused by the site engineer's test pit is clearly visible. Scale in feet.

possibly derives from the rim of a cream-slipped or Earlswood-type jug standing adjacent, upside-down on the kiln floor.

The pipeline follows the slope of land downhill to the south, thus the wide ends face north. Curiously, attached to the lead cover belonging to the final pipe in the sequence was the broken wide end of a pipe. The lead cover and associated fragment lay, upended, detached from the disturbed remains of the line. Presumably this final pipe had been of double-ended form although it is possible that a broken wide end had been simply socketed over the narrow end of the last complete pipe.

The perforated lead cover (fig 16) is a simple, rather crude affair, secured by bending triangular tabs over the splayed end of the pipe.



Plate 6. 43 High Street. Medieval pipe drain, showing damaged condition of southern terminus in its clay surround. The lead cover with its associated pipe fragment has been replaced in position as found. Note stone wall immediately beyond. Scale in feet.

Discussion

Medieval and even early post-medieval drain pipes are not common finds and in towns are almost unknown. Dunning (1967) has ably summarised the available information which will not be repeated here. Fifteen years on the position is little changed. The only long runs of medieval pipes found previous to the Reigate discovery are from Glenluce Abbey and from Thetford Priory — both monastic sites. The Thetford pipes (fig 17: C-E) were of three types, none of which were intentionally glazed. Some bore assembly marks. They have been dated to around the middle of the 15th century (Coppack 1973). The Glenluce pipes (fig 17:G) also bore assembly marks and were part of an elaborate system with pottery junction boxes and removable inspection covers. These are of late medieval date (Cruden undated; Dunning 1967, fig 7).

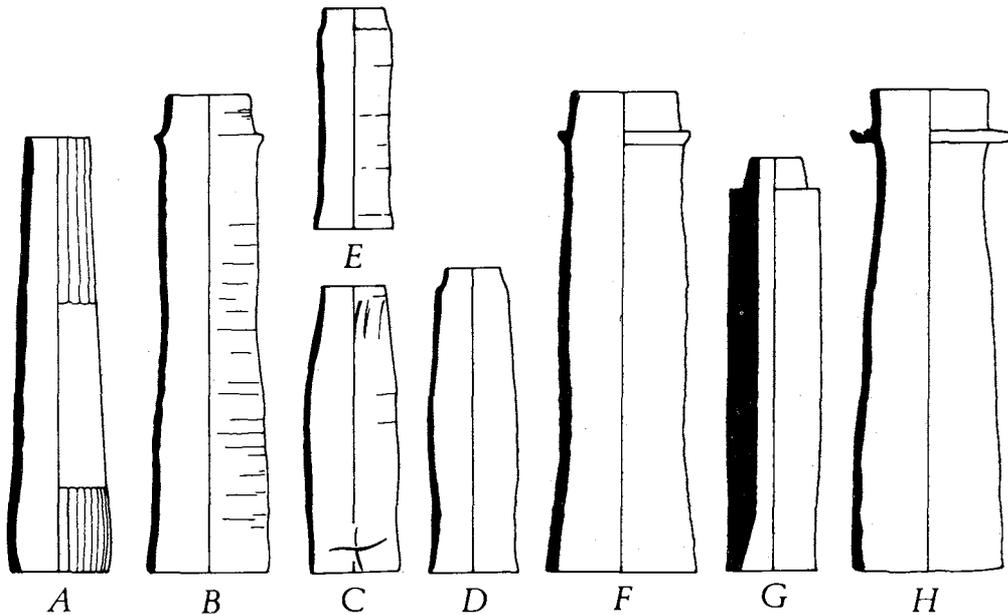


Fig 17. Examples of medieval water or drain pipes from Britain. (1/8) For key, see text.

Other sites where pipes have been found, either singly or in runs include: Ely (fig 17:A), a complete specimen and fragments of others, all with overall external glaze, found during roadworks in the town (Dunning 1967); Laverstock pottery kilns, fragments, 13th century (Musty *et al* 1969); Marwell Manor, Owslebury, Hants (fig 17:F), fragments of uncertain date; Basing House (fig 17:B), ten complete or near complete unglazed pipes, mid 16th century (Moorhouse 1970); Hadleigh Castle, Essex, two 15th century fragments (Drewett 1975); Whitby Abbey, several fragments (Dunning 1967); Linlithgow Palace (Dunning 1967); Canterbury (fig 17:H), a complete pipe and one fragment dated to the first half of the 14th century (MacPherson Grant 1978); and Christchurch, four complete unflanged and fragments of flanged pipes. These are dated as late medieval (Jarvis 1983). A possible fragment from Weybridge, Surrey (Hanworth & Tomalin 1977, fig 44:144) is perhaps more likely to be the stem of a lamp. Jarvis (1983) also refers to a pipe from an excavation at St Catherine's Hill in 1966 (68, fig 28:174), but the context is not clear.

Additionally, an early pipeline found on a Somerset farm formed the subject of a letter in *Country Life* (edition for 18/5/67) but enquiries concerning this have proved fruitless.

Dating and function

No clear external evidence was found to date the pipeline although it must lie between *c*1250 and *c*1500. On the evidence of the fabric a date in the region of *c*1300–50 is suggested.

The Reigate pipeline seems most likely to have served as a drain. It runs downhill and clearly carried liquid away from the High Street. No parallel is known for the lead cover and it seems best to see this as a means to preventing rats and mice from entering and possibly blocking the pipe. The narrow bore precludes anything but rainwater from draining through the pipe and for this reason the cover cannot be seen as an obstruction.

It has already been shown that the documentary evidence suggests that in the late medieval period this part of the High Street was occupied by a house or buildings belonging to the Castle constable or may have been used as a residence for official visitors. It is perhaps in such a context that this elaborate drainage system should be seen.

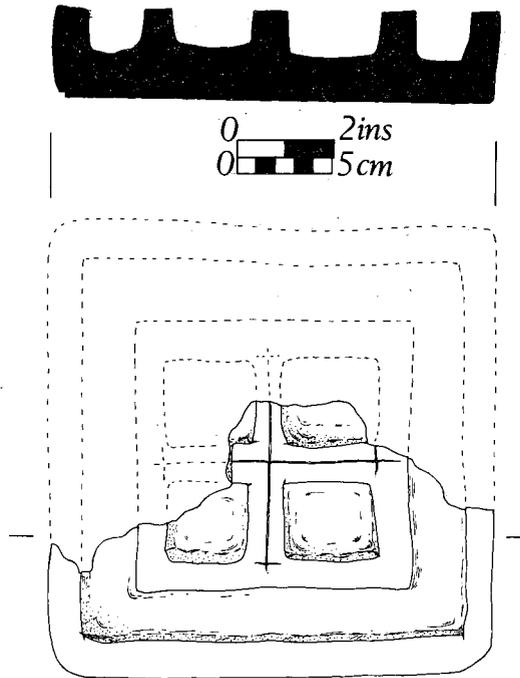


Fig 18. Cresset lamp from 31–33, Eden Street, Kingston. (1/4) Drawn by S Nelson.

THE CRESSET LAMP FROM 43 HIGH STREET (figs 11:34 and fig 18)
by Stephen Nelson

This brick- or tile-like object with six scooped-out compartments, from the well (layers 46/7), is most probably a multiple cresset or lamp, in which a wick would float in oil in each 'cup', either all together or in sequence. It is obviously related to the more specific and ornate carved stone cressets/lamps known from religious sites of medieval date (Evans 1969 and pers comm). Small thrown pottery lamps of simple 'cup' form are well known in many pottery industries from Saxon time onwards and represent an alternative, portable lamp to these larger and presumably static cressets (see eg fig 10:12).

Alternative identifications have been suggested in the past for these objects such as salt cellars, bird feeders (de Kleyn 1968), or simply as moulds but generally they seem too badly formed for use as a condiment dish on a table and not specific enough for a mould. There is a certain similarity to post medieval chicken feeders, notably the example from the Tannery site, 31–33 Eden St, Kingston (fig 18) with its four compartments and outer trough, but on balance their use as lamps seems, at present, to be the most likely interpretation of these objects.

The number of compartments varies between two and six, they are knife-cut and subrectangular in shape with little attempt to smoothe the interior. The marked utilitarian nature of these objects is a feature, they are generally unglazed, and the only known form of decoration is the cross incised on the Kingston example. It is this example which provides the confirmation that, despite its roughness of finish, it was an object meant to be used, and presumably viewed, in its own right. The exact purpose of the outer trough is uncertain — the suggestion that it was water-filled seems unlikely in view of the porosity of the brick fabric and the relative narrowness of the cutout.

The question of dating for these objects is again one of uncertainty and presumably the simple form covers a long period. Both the Kingston and Reigate finds were in sixteenth century

contexts. The survival of the form in stone into the 17th century is known in Scotland where dated tailors' candle stones are found (National Museum of Antiquities, Edinburgh), so these counterparts in brick may have lasted as long.

A brief list follows of some recorded examples. This is by no means exhaustive and the writer would be pleased to hear of any others:

1. Chester, ?2 compartments (Thompson 1973).
2. Ospringe, Kent, ?2 compartments, also a reference to a 4-compartment example from Mersham Quarry (Thorn 1979).
3. Kingston, 31/33 Eden Street, 4 compartments and continuous outer trough (Kingston Museum, pers comm from D Hinton, fig 18).
4. Kingston, 21/25 Eden Street, 2 compartments (Kingston Museum).
5. Long Melford, Suffolk, three fragments, multiple compartments (Ipswich Museum 970.79).
6. York, King Street, 4 compartments (York Museum).
7. Guildford, 4 compartments (Guildford Museum, Holling 1964, *passim*).

I would like to thank Miss Evans for advice on the probable cresset lamp from Kingston and Derek Hinton for permission to publish it.

THE CLAY TOBACCO PIPES (fig 20) by D A Higgins

The excavation produced a total of 406 pipe fragments (79 bowl, 321 stem, 6 mouthpiece) from 17 contexts. There are no early to mid 17th century deposits, and few residual 17th century bowls although all later periods are well represented. During the later 18th century these consist of heart types and those made by the Thorntons of Dorking, which in turn are replaced by Corney pipes from Croydon during the 19th century.

Two heart pipes were found in Area 4, one of which has an internal bowl cross. The other example has double cut hearts on the spur (eg Higgins 1981, fig 37:15). There were no examples of the plain George Thornton types, but at least four of the fluted type were found in layer 15. Two of these (Higgins 1981, fig 31:2 type) had a rather thin internal bowl cross made by the same stopper, while a third similar bowl type had a much more substantial cross. The fourth example (Higgins 1981, fig 24:11 type) had no cross, but was interesting since another pipe in layer 15 is taken from the same mould. In this example however (fig 20:6) the initials have been partially erased from the spur. Another fluted pipe with erased initials is known (Higgins 1981, fig 25:4) which may originally have been a Thornton mould too. This suggests that at some stage, presumably after the death of George Thornton II in 1823, his moulds changed hands, but continued to be used locally. The only other local maker known around this date is Thomas Thornton, but he would not have needed to erase the surname initial, and anyway is not recorded after 1815. It seems most likely therefore that at least one other maker was working in the Dorking/Reigate area c 1820-40.

Five Robert Corney pipes were found in layer 15 (eg fig 20:8) and another from Area 3 (fig 20:7), ranging in date from c 1810-80. Although it is as yet impossible to sort out the moulds used by each generation at least consistent supply to Reigate during the 19th century is shown. Another pipe used in mid-19th century Reigate is the fox and grapes design (fig 20:10). Although unmarked, at least four other examples from this mould have been found in the Reigate caves showing that it was supplied locally. The mould must have been made by the same maker who supplied the Corneys since they used an almost identical example (Higgins 1981, fig 29:8).

The excavation also produced some new marks for Reigate such as the ?LT fluted bowl (fig 20:5), and the SH mark from layer 15. The latter is a distinctive pipe having a faint bar and dot beside the S, and two faint lines across that side of the stem a little way behind the bowl. Another new mark is the Harrington & Sons stamp (fig 20:14). This was probably made in Brighton

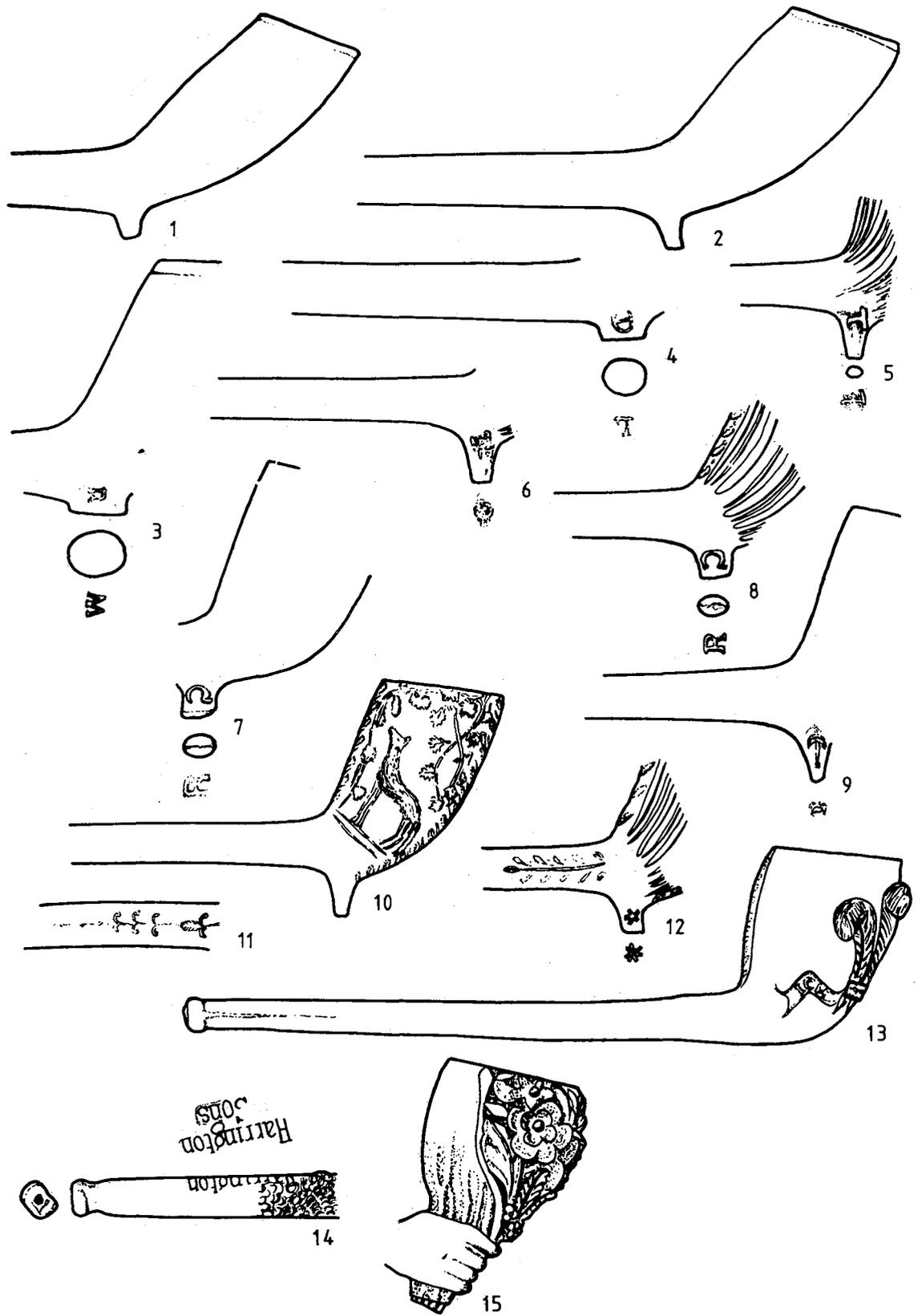


Fig 20. Clay tobacco pipes from 43 High Street. (1/1) Drawn by D Higgins.

rather than Horsham and as such is the first from that source known in Surrey. Harrington & Sons are recorded in 1864 and continued until at least 1910 (Atkinson 1977, 13). This example has been extremely well used resulting in wear of the mouthpiece into an oval. It appears to have been consistently smoked at an angle to the left.

Another import to the county is the floral bouquet (fig 20:15). This is almost certainly French, dating to c 1880, and originally had coloured decoration on the flowers. Such elaborate imported pipes would have been more expensive than those produced locally but both Fiolet and Gambier pipes are found in small numbers. Also about this date is a wide oval stem section with an incuse moulded London mark unusually near the mouthpiece. Another slightly less common design is the Prince of Wales feathers (fig 20:13). Although a well known Victorian design, later 19th century examples are not common in Surrey, and as yet there are no local parallels for this type. Several of the 19th century pieces of stem have simple floral decoration in various styles (eg fig 20:11,12).

There were few earlier 18th century marks. One example of c 1700–20 from Area 4 marked W?R (fig 20:3) may be by the same maker as an example from Coulsdon (Higgins 1981, fig 29.10). Another pipe of this date from layer 15 has very faint, poorly executed initials (fig 20:4). The only other early 18th century example, also from layer 15, is a moulded Lawrence Geale mark from Guildford. Layer 15 is a large, well mixed group with a wide date range. This is a pity since it also contained an unusual perforated pipeclay disc (fig 13:7). This seems to have been formed by pressing a piece of clay into a shallow hollow, and has had a bar impressed across one side and been perforated from the other. The edges remain sharp and untrimmed, so it seems to have been a mass produced item, where finish does not matter. It does not look like any known form of button or counter.

The only usefully stratified pipes came from layers 43–69 which relate to the use, remodelling and demolition of the kiln. The main bowl type associated with the kiln is a late 17th century spurred variety (fig 20:1, 2) which was only common in Surrey for a short period. The pipes are almost exclusively of this type with examples from more than one mould, including some well developed forms (fig 20:2). There was only one fragment which possibly came from an early type 25 (Atkinson and Oswald 1969; 180) so it seems most likely that all these deposits date to the 10 years or so before 1700. This includes the rubble fill, robbing of the west wall and both ash floors, the lower of which contained the latest looking fragment. The only intrusive material seemed to be in the robber trench of the west wall where three pieces of stem seemed to be 19th century, although the remaining 18 pieces all fit in with a late 17th century date.

For a detailed catalogue, see Microfiche 5–7.

Appendix

43A HIGH STREET, REIGATE: A SEVENTEENTH CENTURY BUILDING FRAGMENT (pl 7)

by Richard Harris

Number 43 High Street dates from the early part of this century, but retained some fragments indicating that its predecessor had been a timber-framed building of late medieval character. Behind it stood no 43A, a small timber-framed building that appears to have formed originally a rear parlour wing to the High Street property. This building was empty and derelict in 1981, and its site was required for a fire escape tower for the new development. Faced with the imminent demolition of the building, the Weald and Downland Open Air Museum undertook its dismantling in June 1981 with the cooperation of the developers and the demolition contractors, and the help of the Reigate Society. Six weeks was allowed for this operation.

The main storey of the building contained the parlour, and was roughly level with the High Street. Because of the steeply sloping ground, however, it was at first floor level relative to the ground behind. Above it was a room of similar quality, the parlour chamber. The roof contained



Plate 7. No 43A High Street, Reigate during its dismantling by the Weald and Downland Open Air Museum in Spring 1981.

a habitable attic, and the building sat on a stone basement. In the gable wall was a chimney stack of Reigate stone, with an external width of 9' 0" at the base.

Each of the two main storeys appears to have provided originally a large room with a fireplace, and an inner room of some kind. In the chamber storey the evidence for this inner room was well preserved and showed it to have been a small closet under the stairs leading up to the attic. In the parlour storey the plan was less clear, but there were indications that the inner room had been separated from the main room by oak panelling, and that the inner room had an external doorway, possibly for a garderobe. The staircase from parlour to chamber was not original. Some surviving fragments in the wall between the wing and the main building suggested that the wing had been joined onto a rather narrow building, possibly a staircase tower linking the High Street range with the rear wing. Originally, therefore, there had been no staircase linking the parlour and chamber within the rear wing itself.

The chimney stack formed an integral part of the south gable wall of the building. It provided each of the two main rooms with a fine carved stone fireplace, with four-centred heads and 'pumpkin' stops to the mouldings. Comparison with other similar fireplaces suggests a date in the early 17th century, perhaps c1620, and this evidence may be taken to date the whole wing. The soft stone of the chimney had deteriorated badly: large areas had been rebuilt in brick, and the whole of the outside had been covered with hard cement render.

The building was fully timber-framed above basement level, the walls being framed in square panels with solid daub infill. The main window positions were clearly defined in the framing, but the windows must have been surface-fixed or projecting, and had left little or no evidence of their precise form. Some 17th century mullions had been re-used in windows on either side of the chimney stack.

In common with very many houses of this period, the interior plaster had been covered with vigorous painted decoration. None of this was visible when the building was first recorded, but during dismantling some surviving fragments came to light. Some areas had curvilinear black-on-white designs, while others had brightly coloured foliage and fruit. Above each fireplace was a landscape scene, with coloured designs also on the carved stones of the fireplaces.

The timbers, fireplaces, and painted panels are in store at the Open Air Museum, Singleton, where it is intended that they will be re-erected and displayed in due course. A full account of the building and the paintings is in preparation.

ACKNOWLEDGEMENTS

The excavation and the subsequent preservation of the kiln would not have been possible without the friendly help and cooperation of many people. These include Mr M J Bridges of Rush and Tompkins Developments Limited who also kindly allowed no 43A to be used as a tool store during the excavation. Considerable help was also forthcoming from Alex Machin of the Comprehensive Design Group who supplied detailed site plans from which the plan, fig 2, is taken. Thanks also are due to Rodney Ford of the Ford Partnership who arranged access and did much to secure the preservation of the kiln. Mr Wilcox and Mr Ingle of the Reigate and Banstead Borough Council gave assistance by speedily granting permission for excavation once it had been realised that the Council retained ownership of the excavated area. Mr Goodyear, the site foreman showed considerable interest and provided friendly cooperation during the excavation of Area 3 and allowed access to remove the remainder of the pipeline once construction had commenced. A special word of thanks must be given to Rodney Brown who voluntarily cleared the site of undergrowth, accumulated rubbish and broken glass and without whose help the excavation would have been rendered considerably more arduous. Richard Woodhouse, secretary of the Reigate and Banstead Archaeological Coordination Committee helped greatly by making the necessary contacts. I should also like to acknowledge the help of Derek Stidder who,

as always, surveyed the levels.

The excavation could not, of course, have functioned without the members of the Holmesdale Archaeological Group and other individuals of whom Leslie Brown, Pat Garner, Steve Robinson, Edward Rogers, Mary Slade and Peter Smith deserve special mention. I wish also to thank Felix Holling for discussing the kiln on site; Dennis Turner for much helpful advice and encouragement, both with the excavation and the report; Jeremy Greenwood for his invaluable documentary work; A H V Smith of the National Coal Board's Scientific Laboratory at Wath-upon-Dearne who examined and commented on the coal samples; D M Archer for examining the fragment of medieval glass; Richard Harris of the Weald and Downland Open Air Museum for his sympathetic cooperation and for supplying the note on no 43A; R W Sanderson and J Kenneth Major for commenting on the millstone; Stephen Nelson for his considerable help during the excavation and for his help with the post medieval pottery, for providing the note on the cresset and also for providing references to previous discoveries of medieval pipes; David Higgins for his report on the clay pipes; and last, but not least the members of the Surrey Archaeological Society Excavation Committee who made this project the winner of the Society's 1982 Margary Archaeological Award.

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