

EXCAVATIONS AT RADCLIFFE TOWER

1979-80

N Tyson

Radcliffe Tower (Fig 1) stands 140m W S W of Radcliffe parish church (SD 796074) about 1.2km east of the modern town centre, at a height of 68m OD. It occupies the first terrace above a floodplain in a loop of the River Irwell below its confluence with the River Roch. This loop takes the Irwell from the general southerly course which it follows from the Rossendale uplands to this point, westwards through a deep post-glacial gorge to Nob End.

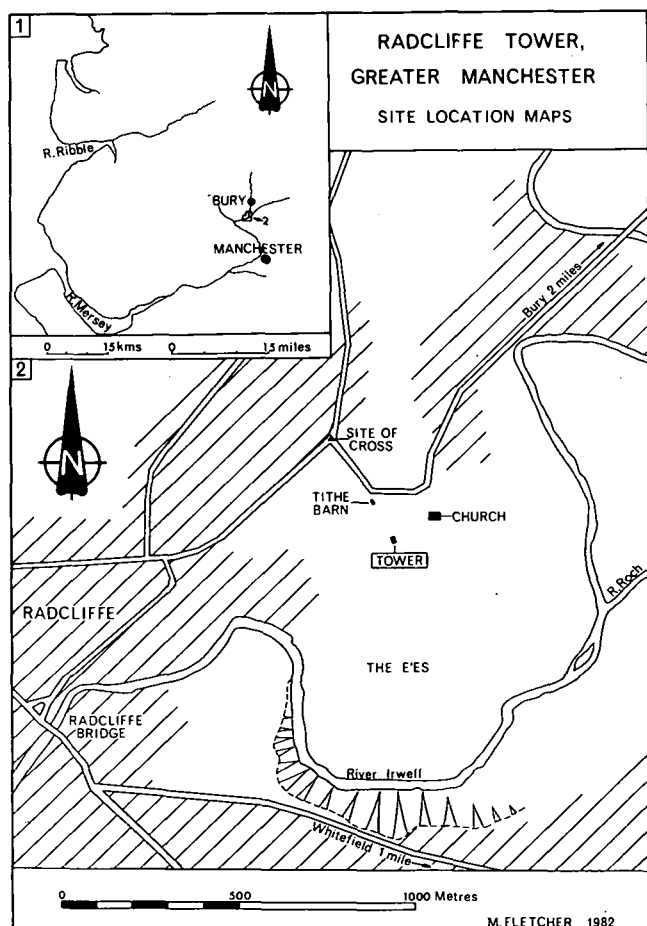


Fig 1 Radcliffe Tower : site location

Alluvial sand and gravel underlying the site probably supported a ground-water gley soil on the floodplain, but the more freely-drained terrace upon which the tower was built is a brown earth of the Downholland association. Middle Coal Measure Trencherbone or Cannel Rock sandstone used in construction would have been available locally. There are numerous coal seams in the locality, the nearest being the Top Five Quarters mine which runs south west about 50m south of the tower. Whilst some reclamation has been carried out and more is planned, the valley at this point still bears the scars of industrial exploitation, although some relict woodland survives on the high south bank overlooking the floodplain.

In 1950 enigmatic timber structures were revealed by gravel digging near the confluence of the Roch and Irwell, and Mesolithic flints were reputedly found. Stone axes of Neolithic and Bronze Age date have been discovered, and a fine cast-flanged bronze axe was found in 1949 (Spencer 1950). More timber structures were excavated lower downstream in 1961 (Hallam 1961). During the Roman period gravel was probably quarried in the vicinity for the construction and maintenance of the Manchester-Ribchester road, which runs close by.

Domesday Book records Radcliffe as being held by King Edward as part of the Royal Manor of Salford. After the Norman Conquest, the Baron de Mersey gave Radcliffe manor to Nicholas Fitz-Gilbert de Talbois who adopted the place name as his surname and thus founded the Radcliffe family. The family prospered during the medieval period, with branches in possession of Ordsall Hall Salford, Smithills Hall Bolton and Baguley Hall Wythenshawe.

In August 1403 James de Radcliffe was granted a licence to rebuild his manor house "... with walls of stone and lime, to enclose anew and within those walls erect a hall and towers ..."

During the medieval period a park and fishponds could have been accommodated in fairly close proximity to the manor house. This is implied by

an indenture of exchange dated 1338 between Richard de Radcliffe and William del Grenehurst, of tenements in Radcliffe called Gorill and le Light-birches within the 'New Park' (Irvine MSS 49).

By 1518 the main line ceased with the death of John Radcliffe, when the manor passed to Robert Radcliffe, subsequently first Earl of Sussex of the Radcliffe family. In 1561 Thomas Radcliffe, third Earl of Sussex, sold the manor to Richard Ashton of Middleton for 6000 marks (Hampson 1940).

An illustration showing the hall with a ruined tower attached was drawn for Dr Whitaker in 1781, by which time its status had been reduced from manor house to farm. By the mid 19th century the hall had been demolished leaving only the ruined tower, which remained in use as a farm building until after 1950 (Tyson 1985).

CIRCUMSTANCES OF THE EXCAVATION

Gravel quarrying carried out more than thirty years ago on the flood plain of the river resulted in the formation of lagoons, which were subsequently filled with industrial waste. As tipping was to continue throughout the nineteen eighties, the site owners proposed to landscape the tip entrance in 1980. Since this lay over the area of the main hall, west wing and courtyard, it was considered essential to determine the archaeological potential of the site so that this might be respected when

such landscaping took place.

The aims of the 1979 excavation were to establish the nature and extent of surviving stratigraphy and locate an inferred enclosing wall. Discovery of an apparent moat or ditch section prompted further work in 1980 to determine its direction.

THE EXCAVATION (Fig 2)

Six trenches (A-F) were excavated by hand, effectively sectioning the north-west corner of the site from the hall area to the modern north and west boundaries. Only plans and sections of trenches A, C and F are reproduced here, with most 19th century features omitted from plans. A ground plan, four external and four internal elevations of the surviving Tower remains were also drawn (Tyson 1985).

Work was carried out in September 1979 and April 1980 by volunteers under the direction of Bury Archaeological Group. Trenches were backfilled by machine after F.F25 had been covered with polythene. The site has since been levelled up and grassed. Finds and the archive have been temporarily deposited with the Group secretary.

Acknowledgements

Special thanks are due to the people who took part in the excavation and to Stephen Moorhouse for his

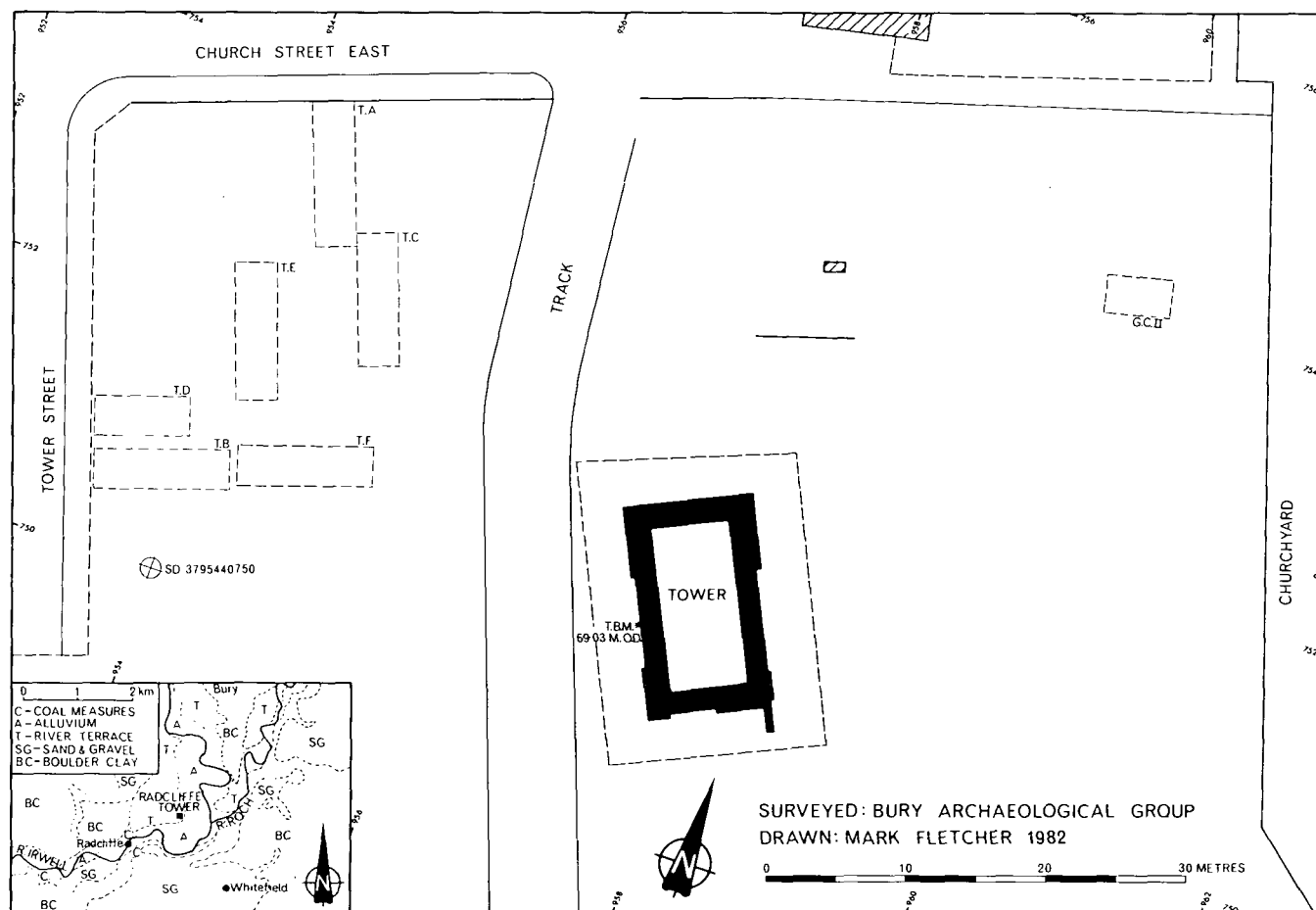


Fig 2 Radcliffe Tower : site plan

report on the aludel. Grateful thanks are due to the site owners Wimpey Waste Management for permission to excavate, and to the Planning Department of Greater Manchester Council and Bury Metro Lottery for financial help. Valuable help was also provided by Radcliffe Local History Society and Bury Metro Leisure Services Department.

SUMMARY OF MAIN PHASES

Since the medieval and early post-medieval phases cannot be reliably dated at this stage by finds, their chronology is based on the interpretation of the stone pitching laid down as part of a rebuilding phase in c 1403. The following sequence may be tentatively suggested:

Phase I a (medieval)	rubble foundation and ditch or pit associated with earlier structure.
Phase I b (A D 1403)	major rebuilding, extension of courtyard and construction of enclosing wall.
Phase II a (c1500-1730)	construction of west wing; modification of enclosing wall and later ditch filling.
Phase II b (c1730-1840)	construction of farm buildings; demolition of hall and certain farm buildings; construction of Tower Street cottages.

THE FEATURES

A full list of contexts in trenches A, C and F is given in Appendix 2, but the principal features on the site were as follows:

Phase I a Ditch (Fig 3)

Crossing the central and southern half of trench C a ditch or pit 7m wide by 1.5m deep had been dug into the natural gravel. The sides sloped to a flat base, 1.6m wide, which was covered to a depth of 450mm by a very dark greyish-brown organic silt (19). Above this a dark brown clayey silt (18) formed a layer up to 800mm deep extending to within 2.6m of the north end of the trench. This secondary silting was sealed across the centre of the ditch by a layer of dark brown silt containing charcoal and burnt clay (13), the ends of which were truncated by later intrusions. Finally, overlying the layer of burnt material were several lumps of roughstone up to 400mm square, including a single unweathered sandstone ashlar 700mm long by 300mm broad. These were levelled off with dark reddish-grey sandstone pitching (10) in a layer up to 250mm thick, thinning laterally and situated across the centre of the trench in a formation up to 4m wide. The original extent of this stone pitching could not be determined owing to disturbance by 19th century foundations. A small pit (F14) in the west section was sealed by post-medieval consolidation.

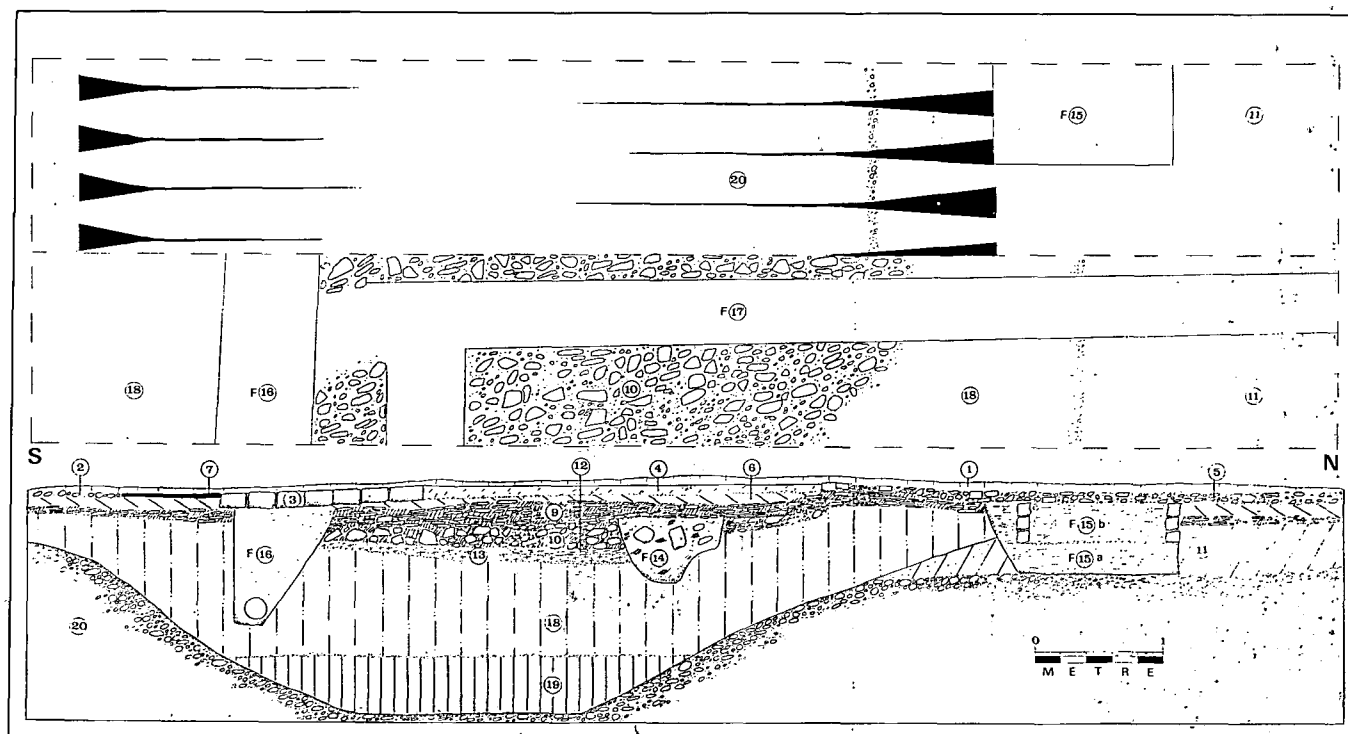


Fig 3 Radcliffe Tower : trench C plan (top) and section (bottom)

Phase I a Foundation (Fig 4)

Situated approximately 7m inside the phase I ditch and projecting 1.3m from the south section of trench F, was an unmortared sandstone rubble foundation (F25), 2.3m wide by 200mm deep. It rested on a gravel surface (21) sloping slightly to the west, where the foundation depth increased to 400mm and where some perimeter blocks were up to 600 mm long. The north edge of this feature was partly overlain by burnt clay, probably associated with a hearth of phase II a, and it was cut diagonally by an old service trench. Patchy evidence of sandstone pitching, as in trench C, also occurred.

Phase I b Enclosing wall (Fig 5)

A section of unmortared sandstone rubble wall foundation (F25) crossed trench A at right angles, with its face 2.4m from the south end of the trench, overlooking a shallow ditch. It survived to a height of 700mm and a width of 680mm and comprised five courses. The top course contained two headers of millstone grit, each approximately 500mm by 400mm in size. However this appears to have been a modification of a foundation originally 1.44m wide, as the bottom course projected a further 760mm to the rear. The modified wall was later used as foundation for a Georgian brick barn, the robbed section having been backfilled with loam containing sandstone fragments, later overlaid by a 19th century brick-lined drain.

Phase I b Courtyard

Evidence of this feature was found to a greater or lesser extent in all trenches except A. In trench B, a layer of dark reddish-grey sandstone fragments up to 200mm thick extended across the trench in a

formation 1-2m wide, within 1m of its west end. In the adjacent trench D at the same level were a few scattered fragments of sandstone, probably spread from B. Both areas had suffered extensive damage from 19th century cottage foundations and floors. Evidence of stone pitching was found in trench C and has been described above. Extensive disturbance was caused in trench E by cellaring, but vestiges of the feature survived as a layer of compact reddish-brown clay with small sandstone pieces, extending 1.4m from the south end to a maximum thickness of 120mm. It was also present in a 2m wide formation across the trench 3m from its north end, albeit cut by a drain and service trench. Similarly in trench F, reddish-brown clay with sandstone fragments formed a patchy layer (7) up to 100mm thick throughout, and was overlaid by slight remains of the west wing foundations described below. A dump of sandstone pieces, with occasional lumps of roughstone 300mm square, filled a depression 3.5m long by at least 1.2m wide in the south-west section.

Phase II a Foundations (Fig 4)

A section of sandstone groundwall (F8) crossed the north-east corner of trench F. It consisted of three contiguous ashlar, with a total visible length of 1.4m, a maximum width of 240mm, and a height of 130mm, and rested directly on a brown/dark brown derived clayey loam. Parallel with F8 and some 6.4m west of it were the remains of a rubble wall (F24) 260mm wide by 160mm high. It was placed on a single layer of stone roofing tiles, which in turn overlay sandstone consolidation of the courtyard as described above. The sandy loam (16) underlying the consolidation layers in the central and western half of trench F was contaminated to a maximum depth of 560mm; whilst anomalies

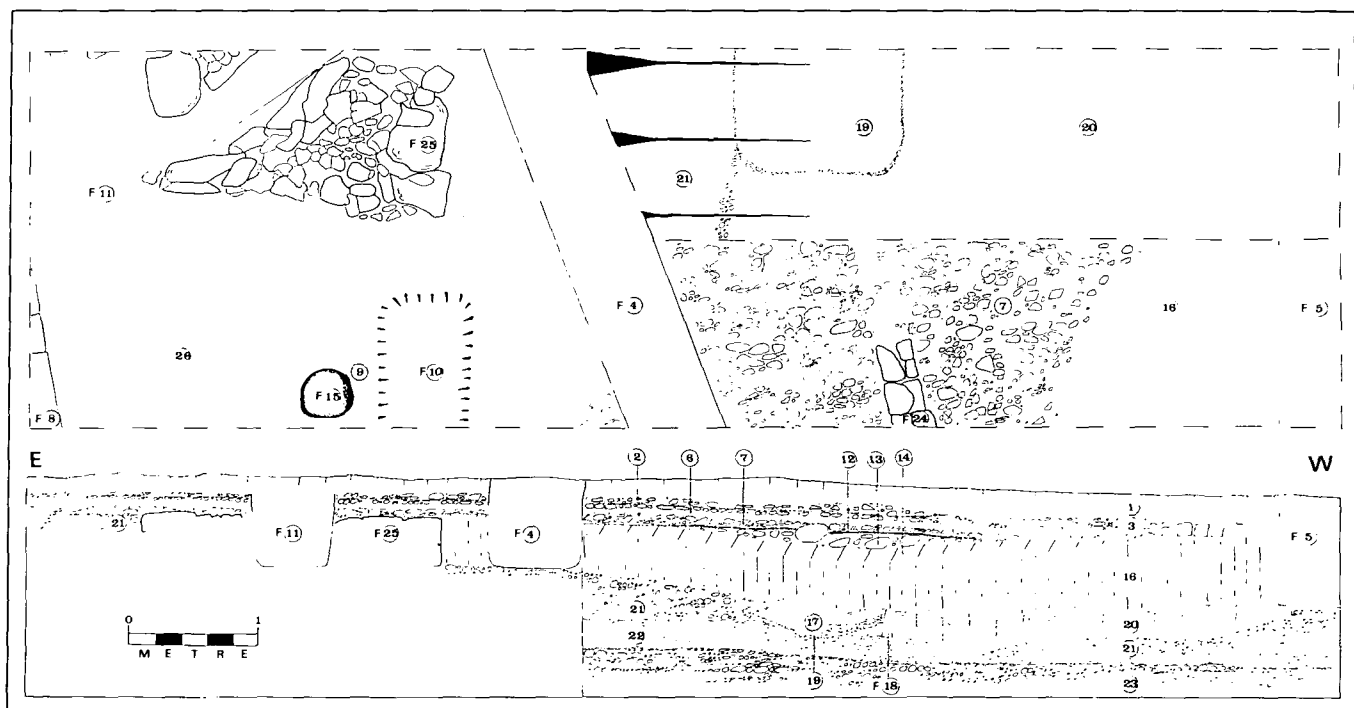


Fig 4 Radcliffe Tower : trench F plan (top) and section (bottom)

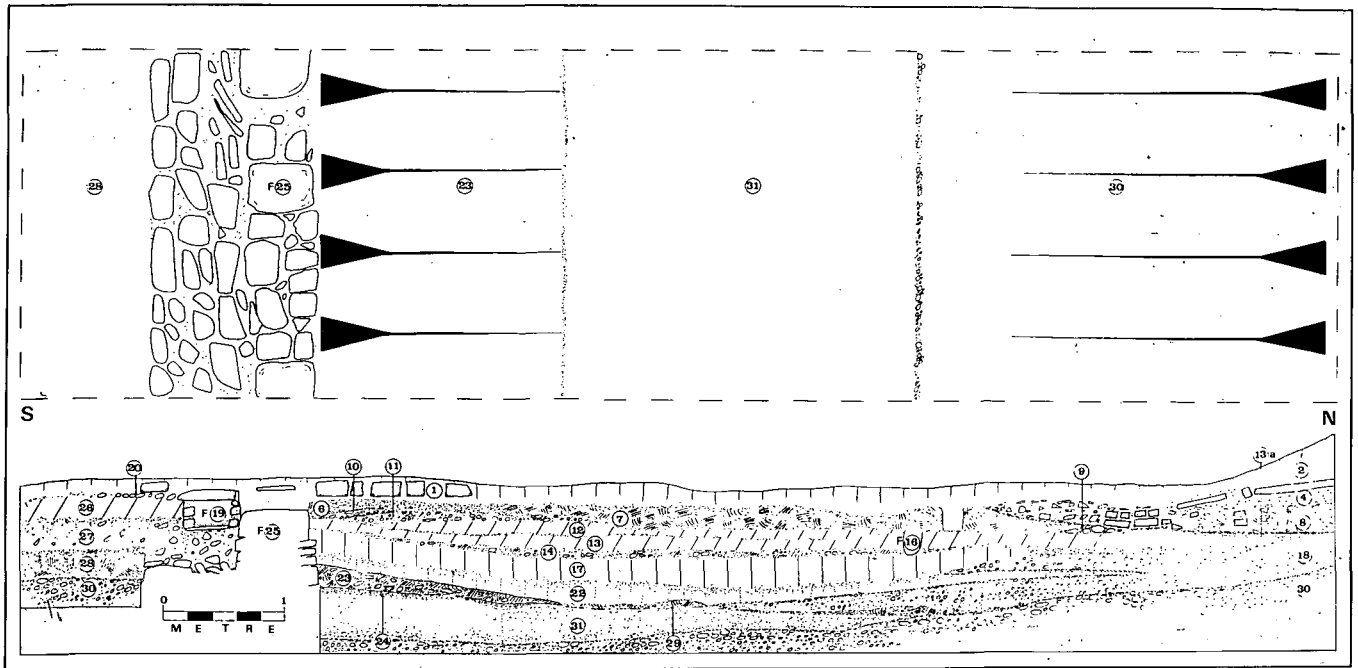


Fig 5 Radcliffe Tower : trench A plan (top) and section (bottom)

were visible in the section, these were perhaps attributable to the fickle nature of the alluvium, and there was no convincing evidence of a ditch.

Phase II a Ditch (Fig 5)

Commencing at the base of the enclosing wall, a shallow ditch 1m deep by approximately 7m wide ran across trench A. The counterscarp was not well defined, since it had been dug into loose gravel without being stabilized: unlike the scarp (23), which remained intact as a capping of dark brown clay reinforced with sandstone in a layer 200mm thick, which tapered away 2m from the wall face. This capping, which had remained exposed long enough for clay wash from it to spread up to 3m, overlay a thin layer of residual dark brown silt (24) 30mm thick. The remaining ditch fill consisted of several mixed layers of sand, gravel and loam. A post-hole (F15) 400mm in diameter by 200mm deep, dug into the upper ditch fill, may have been associated with a rectangular slot (F16) 150mm wide by 200mm deep, projecting from the west side of the trench. In its final stages the ditch in this area was levelled up with clayey sand, loam and cinder to form flooring for a barn.

Other features

There were two features in trench B which could not be satisfactorily attributed to a particular phase. A square or rectangular post-hole, 600mm by 250mm visible width and 500mm deep, was situated 3.13m from the east end of trench B, in its south section. It was filled with dark brown silty sand and small sandstone pieces, and contained a rectangular-sectioned packing stone, set on end, 500mm high by at least 200mm wide. The clay overlying this feature produced a few sherds of 16th century coarse ware, suggesting it may have become redundant during phase IIa. The second feature was a stake hole, 170mm in diameter by 250mm deep, filled with silt and the rotted remains of a stake, dug into derived loam in the centre of trench B, 3m from its east end.

THE FINDS

Pottery

Analysis of the pottery shows that only five medieval sherds, representing a minimum of five vessels, were recovered. Most interesting among these was part of a ceramic aludel (Appendix 1). Although the number of early post-medieval sherds is greater, only four vessels are represented: a disappointing result.

Practically all the remaining pottery came from the ditch fill in trench A, and includes a number of familiar 17th century wares from South Lancashire and the Midlands. Five sherds of tin-glazed earthenware, from either Bristol or London, and 14 pieces of Rhenish stoneware bring the total sherds recovered to 298.

a. Medieval (Fig 6)

- 1 Strap handle in unglazed white fabric with quartz grains up to 1mm; trench B context 8.
- 2 Body fragment in light grey/grey fabric with light red internal surface, finely gritted with rounded grains up to 0.5mm; exterior covered with a shiny olive glaze B8.
- 3 Base of ceramic aludel: see Appendix 1 D8.
- 4 Strap handle in very pale brown, finely-gritted fabric; reddish-yellow exterior with two spots of thin, pale olive glaze D7.
- 5 Body sherd in unglazed reddish-yellow fabric with light grey/grey core; very fine quartz grains and light inclusions D8.

b. Early post-medieval (Fig 6)

- 6 Handle stub in hard grey fabric with reddish-yellow surfaces and occasional speckles of thin olive glaze F7; total sherds 36, minimum vessels 1.

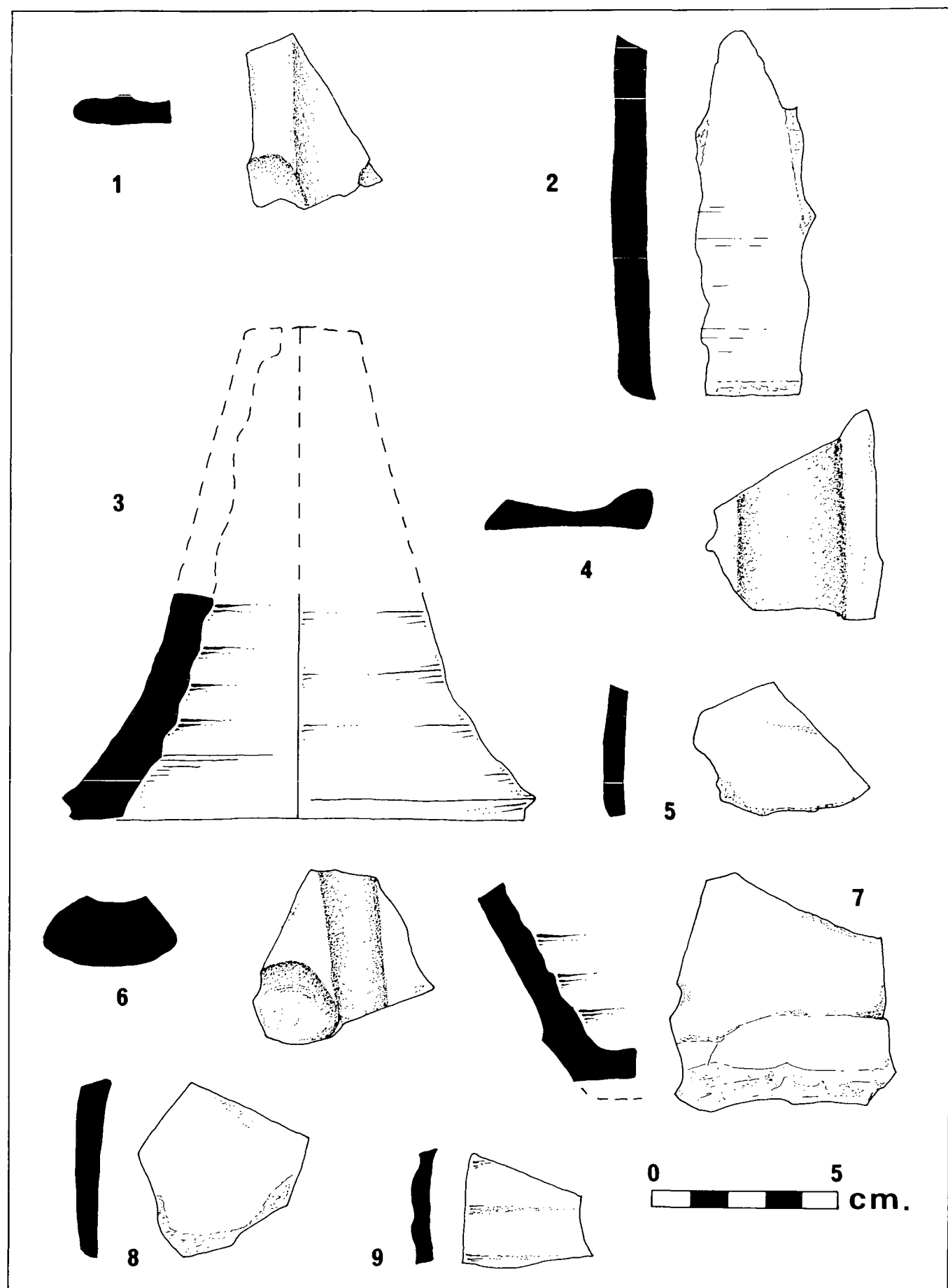


Fig 6 Radcliffe Tower : medieval (1-5) and early post-medieval (6-9) wares

- 7 Base fragment of cistern in hard reddish-brown fabric with reddish-brown rilled interior; greyish-brown exterior with knife-trimmed base and very faint spots of yellow glaze **B7**; total sherds 2, minimum vessels 1.
- 8 Body sherd in hard, dark grey fabric with white inclusions up to 0.5mm; reddish-brown interior and red exterior with thin, patchy weak red glaze **B8**.
- 9 Body sherd with external rilling in hard red fabric with few weak red inclusions; interior streaked pale yellow, exterior splashed with brownish-yellow glaze **B7**; total sherds 2, minimum vessels 1.

c. 17th century (Fig 7)

Yellow-glazed ware:

This is a fairly smooth pink fabric with occasional ferruginous inclusions up to 0.5mm. The lead glaze is fired yellow with variable clarity and is usually crazed; there is a tendency to flaking on flatwares.

- 10 Rim of bowl, slightly everted, in fine very pale brown fabric with external rilling; both surfaces covered with a yellow glaze containing small spots of iron **A14**.
- 11 Flange of dish in smooth pink fabric with slight cavity where it has been folded; upper surface originally covered with yellow glaze which has mostly flaked off **A17**; total sherds 24, minimum vessels 6. **A4 A13 A14 A17 A22**.

Iron-glazed fineware:

The colour of fabric ranges from oxidised red to more reduced reddish brown with odd small, white inclusions or streaks. Glazes range from dark reddish-brown to black; very fragmented.

- 12 Straight-sided cup in fine red fabric covered with shiny black glaze; probably originally multi-handled **A17**; total sherds 120, minimum vessels 20 **A9 A13 A14 A17 A22**.

Slipware:

The two main fabrics represented are a light red fabric with numerous tiny black inclusions, and a reddish-yellow fabric with a few small white inclusions, both probably Staffordshire products.

- 13 Base fragment of thrown dish in light red fabric; white slip and much of red glaze flaked off, leaving negative pattern **A17**.
- 14 Base sherd in reddish-yellow fabric with white trailed decoration appearing yellow against yellowish-red surface glaze **A17**.
- 15 Fragment of dish probably with concave base, in light red fabric, glazed yellowish-red internally; rim decorated with white trailed wavy line, and internal shoulder (drawn flat) with serrated leaf (cf Kelly and Greaves 1974, fig 15 no 123, for use of this motif in the early 18th century) **A22**.

There are also three tiny fragments of slipware in very pale brown fabric, one with black glaze on both surfaces and a thin white trail, the remainder with yellow internal glaze and very dark brown external glaze, one with feathered slip **A13**. A single sherd in light red fabric has a yellowish brown internal glaze and narrow white trail **C10**; total sherds 7, minimum vessels 6.

Tin glazed earthenware:

- 16 Shoulder fragment from an albarello in pink fabric with light grey glaze, decorated with blue (stippled) bands and dashes **A17**.
- 17 Body sherd, probably from no 16; decorated with blue and purple (black) bands and dots **A17**.
- 18 Base fragment of bowl in soft, very pale brown fabric, footring broken; both surfaces covered with white glaze, which has collected in blobs round the base **A13**; total sherds 5, minimum vessels 2. Since 'Delft' ware was only produced in Liverpool after c1700, these probably originate in Bristol or London.

Mottled ware:

- 19 Two-lobed press-moulded horizontal handle, in light brown fabric with dark reddish-brown streaky glaze **A13**; total sherds 5, minimum vessels 4 **A13 A9**.

Imported stoneware:

- 20 Base of Bellarmine, in grey fabric with speckled brown external glaze; internally the fabric is vertically creased and fissured; outline of stacking ring appears on the base, within which string marks are visible where glaze has not penetrated.

Two sherds of a medallion (20a) and a handle fragment (20b), together with 10 other body sherds, were also present **A13 A17**.

d. Iron-glazed coarsewares (Fig 8)

Fabric colour ranges from oxidized red to the more reduced reddish-brown, often containing white streaks. Most sherds are glazed both internally and externally, in colours ranging from dark reddish-brown to black, about 8% having a metallic sheen. Forms represented include pancheons, bowls, jars and baking dishes.

- 21 Rim of jar in red fabric with white inclusions and streaks, covered with a patchy, dark reddish-brown glaze **A22**.
- 22 Rim of a bowl in red fabric with white streaks, completely glazed dark reddish-brown **A22**.
- 23 An unusual square or rectangular flat object, with bevelled edges and straight ends, in well-fired reddish-brown fabric with white streaks; the under surface has thin, weak red glaze and the upper surface thicker dark reddish-brown glaze; an oval scar 40mm long

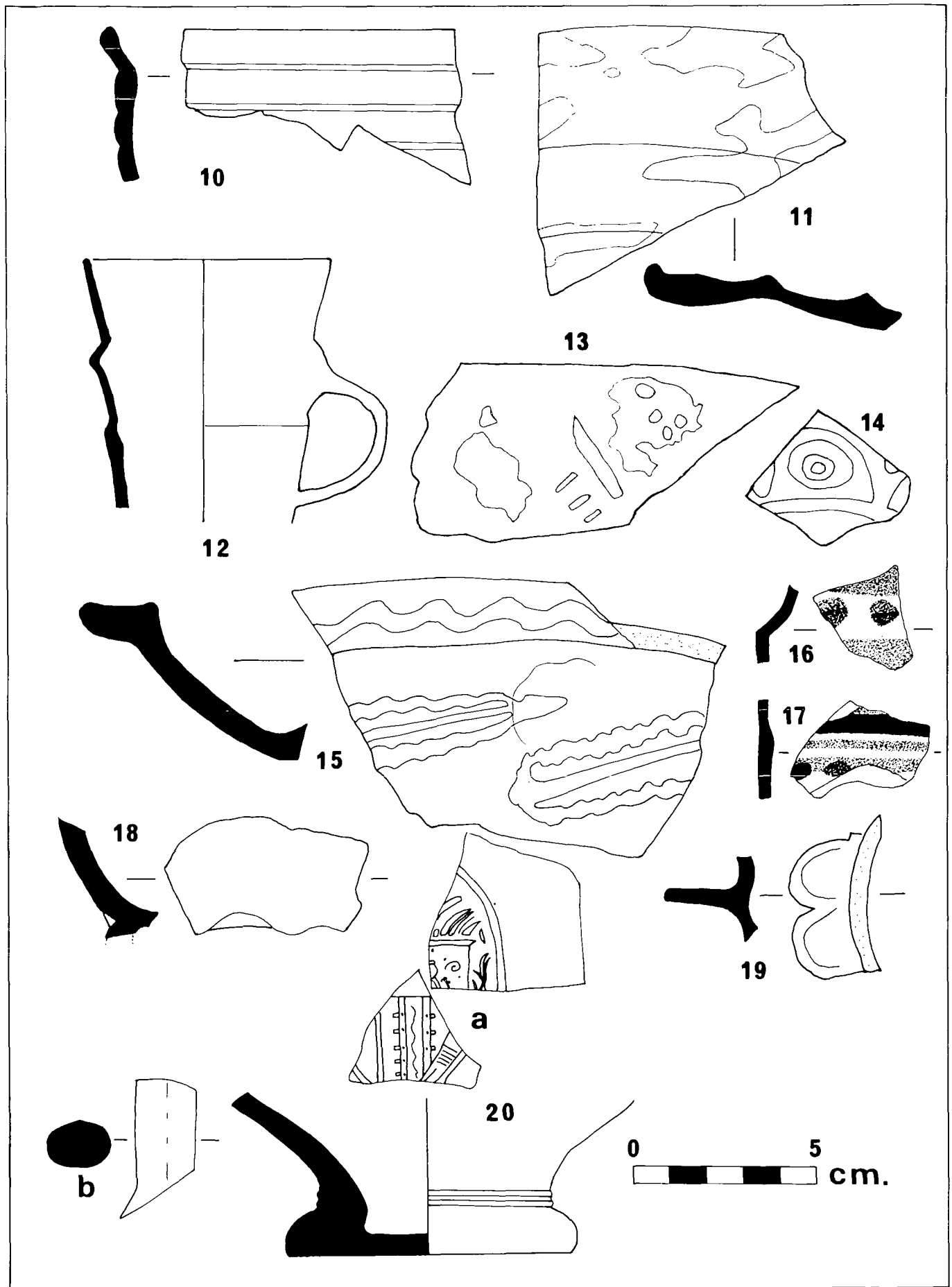


Fig 7 Radcliffe Tower : 17th century wares

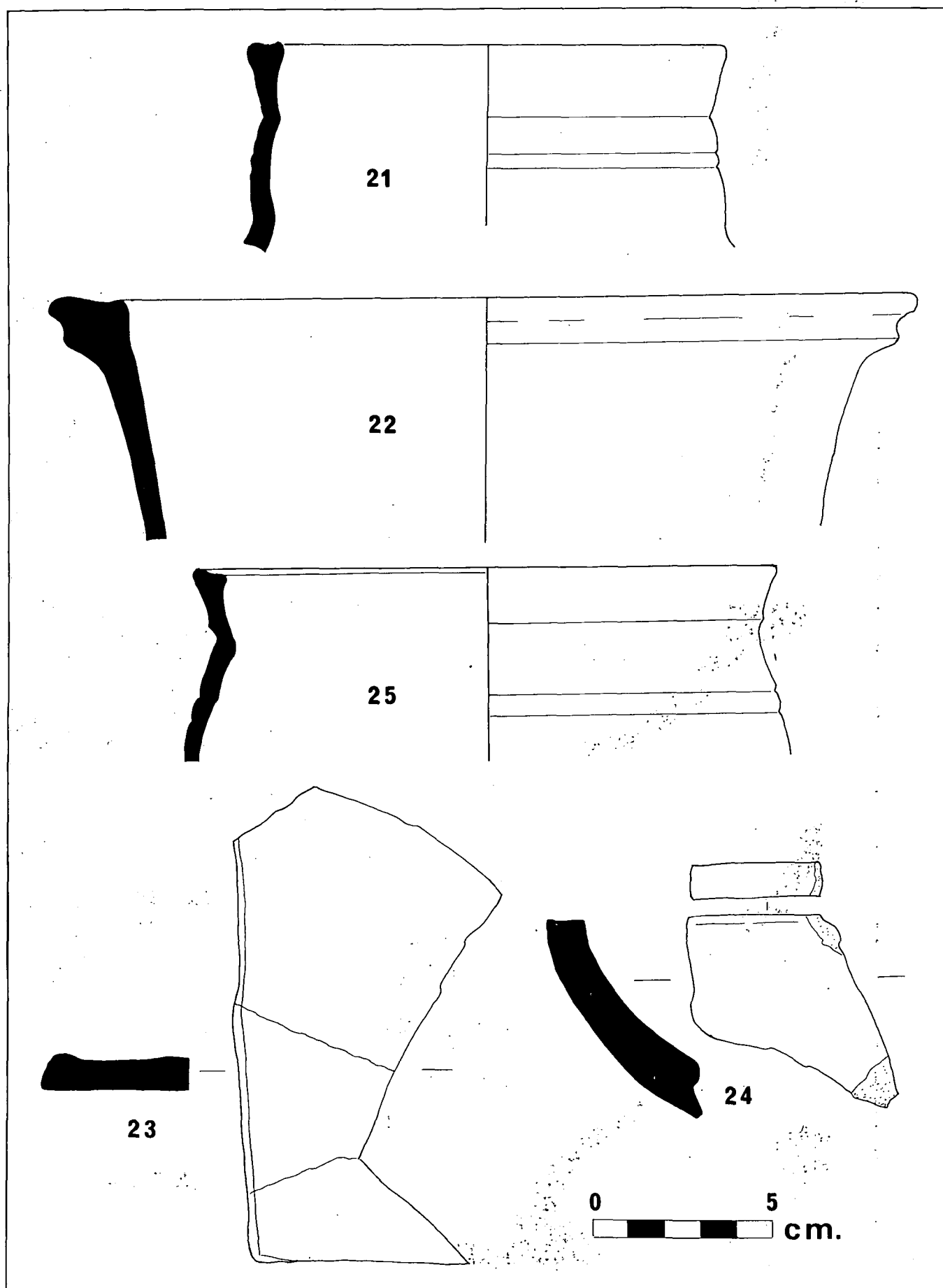


Fig 8 Radcliffe Tower : iron-glazed coarsewares (21-24) and unglazed wares (25)

appears on the surface of one fragment: perhaps where a knob has been removed, suggesting this may be a lid **A14 A17**.

- 24 Rim sherd of baking dish in red fabric with occasional reddish-brown inclusions up to 4mm; glazed internally with dark reddish-brown glaze, which also appears in thin patchy coating externally **A14**; total sherds 69, minimum vessels 16 **A6 A9 A13 A14 A17 A22**.

e. Unglazed wares (Fig 8)

- 25 Rim of jar in a hard, weak red fabric with white inclusions **A22**. Three sherds of two unglazed, fine, hard fabrics were present: one weak red throughout with white inclusions, the other reddish-brown with surfaces oxidized red; total sherds 5, minimum vessels 2 **A17 A22**.

Clay pipes (Fig 9)

A total of 61 clay pipe fragments were found, nearly all from trench A. The more identifiable examples are described below.

a. Bowls

- 26 Flat-heeled bowl with milling and traces of moulding seam; bore diameter 8/64" **A17**.
- 27 Flat-heeled bowl, crudely finished; relief-stamped H1 in circular frame; 7/64" **A17**.
- 28 Bowl with slightly expanded flat heel, milling deeply impressed; 6/64" **A17**.
- 29 Flat heeled bowl with patchy brown patina, relief stamped H in circular frame; 6/64" **A6**.
- 30 Bowl with slightly pinched spur, no milling, stamped IB in cockaded semi-circular frame with serrated border; 6/64" **A13**.

In addition there was a bowl fragment from **A9**, two bowl fragments from **A13** and two bowl fragments from **A17**. A late bowl c1840-1880 with leaf decoration came from E11.

b. Stems

- 31 Stem with attached flat heel, relief-stamped R B in circular frame; 7/64" **A9**.
- 32 Two stem fragments (joined), decorated with eight individually-stamped bordered lozenges containing fleurs-de-lys; probably Dutch; 8/64" **A13**.

Context **A9** also produced a stem with remains of a flat heel attached, with a bore diameter of 6/64". **A13** produced 1 with 4/64", 3 with 5/64", 2 with 6/64", 16 with 7/64" and 10 with 8/64". **A17** produced 2 stems with 7/64" and 6 with 8/64". **A22** contained 3 stems with 7/64", one with flat heel. Four stems with 4/64" came from E11.

Typologically, bowls 26-29 date from 1660-80 (cf Davey 1978, 7J). Bowl 30 with a common South

Lancashire mark is a little later, c1680-1700, and seems to agree with the first appearance of mottled ware in the same context. The most important example is stem 32, decorated in the Dutch manner (cf Oswald 1969, 139, 141). Although this technique of decorating stems with a composite lozenge pattern had been adopted in Chester by the late 17th century (Rutter and Davey 1980, 54), examples are rare and of inferior quality.

Many of the pipes found in this area undoubtedly came from the Rainford area. This is evident not only from excavations but also from documentary sources: in 1697 for example, Mary Wells of Bolton, widow, avoided duty for 38 gross of pipes bought from Thomas Sephton of Rainford, pipemaker (LRO). However, the possible existence of more local manufacturers must also be borne in mind. Oswald (1975, 177) lists two 17th century Bolton names: James Mollineux (1651) and William Smallshawe (1651), but as they came from tokens it is not clear whether they were manufacturers or, like Mary Wells, retailers.

Glass (Fig 9)

a. Vessel glass

- 33 Base fragments of beaker with folded foot, in pale green, bubble-free glass **A17**. A rim fragment from a similar base came from the same context.

b. Window glass

- 34 Fragment of quarry, 1mm thick, in pale green glass with multi-coloured patina; marks left by came still visible **A9**. 41 smaller fragments of similar thickness and type with variable patina were also found in **A9**. Other contexts containing window glass were **A6** (4) **A14** (3) **A17** (8) **A22** (1). A few pieces of 19th century bottle glass came from E11.

Lead (Fig 9)

- 35 A plano-convex disc, 55mm in diameter and 0.2kg in weight; purpose undetermined, perhaps a weight **D7**.

The only other lead object was a strip of window came, 35mm long from **A13**.

Iron

A cylindrical-sectioned hook, 70mm long by 15mm thick, with expanded point; two chain links still attached **A13**.

60 encrusted pieces, mostly cylindrical and up to 50mm long; some appear to be nails **A16 A17**.

Copper

A thin rectangular plate, 65mm by 33mm **A13**.

Flint (Fig 9)

- 36 Plano-convex flake scraper in dark unpatinated flint, without cortex **D8**.

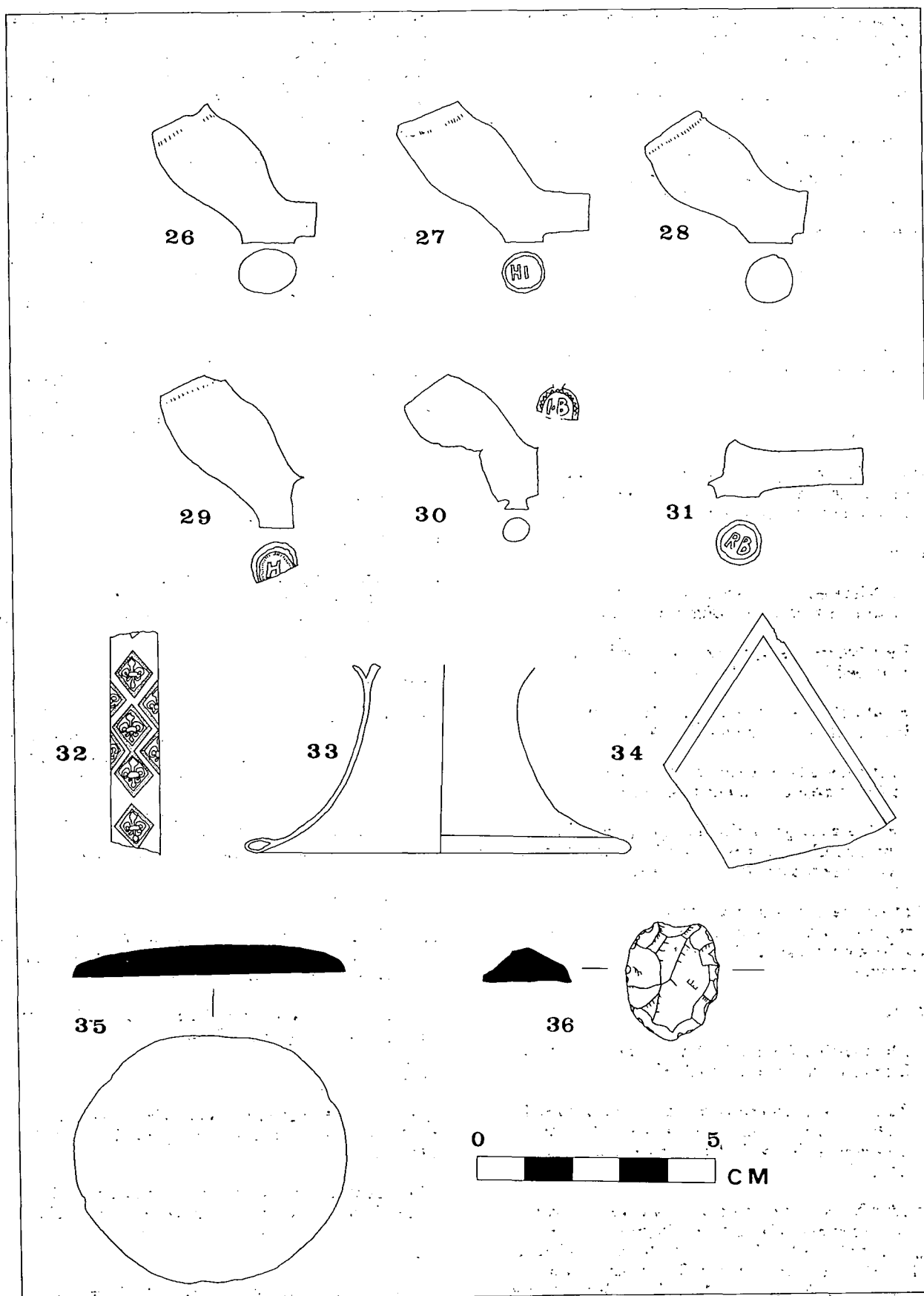


Fig 9 Radcliffe Tower : clay pipes (26-32), glass (33-34), lead (35) and flint (36)

There were also two secondary flakes, each with a bulb of percussion: one triangular, 25mm by 15mm, in dark grey unpatinated flint; the second rectangular, 27mm by 15mm, in light grey flint with yellowish-red patina F20.

Coal

Small pieces of coal were found throughout the excavation, with concentrations in F9 and F12.

Clinker

A small quantity of iron clinker was found in trench A, individual pieces not exceeding 100mm in size A9 A13 A18 A22.

CONCLUSIONS

Any interpretation of a site on the basis of trench excavation alone must be viewed with caution: particularly when the site is only thinly stratified. An attempt is made here to arrange features chronologically, whilst accepting that future work may well require a reinterpretation.

Some time before AD 1400, the existing manor house had been at least partly enclosed on its north side by a ditch, approximately 7m wide by 1.5m deep. Wet conditions encouraged the development of a primary organic silt, which later became submerged below a more general secondary silting almost filling the ditch. Around 1403, when James de Radcliffe was granted a rebuilding licence, quantities of unworked local sandstone were brought to the site for building. Unused blocks of this stone, along with scapplings from the production of ashlar, were dumped into the ditch alignment and other surface depressions, and levelled up as courtyard consolidation with a mixture of stiff clay, probably derived from the quarry site.

Three metres beyond the old ditch, a parallel rubble wall with a foundation 1.44m wide was built, fronted by a shallow ditch approximately 7m wide by 1m deep.

These developments were followed at an undetermined date, perhaps in the early post-medieval period, by the erection of a timber-framed wing. This was under-pinned with low sandstone walls and was nearly at right angles to the main hall at its west end, over the site of an earlier stone structure. Although by the 18th century the west wing had two floors, the discovery of a hearth in trench F would suggest that it was originally open to the rafters. The internal width of 6m between the walls is a little more than the 18 feet 5 inches recorded by Whitaker (1876).

Perhaps during the early post-medieval period, the enclosing wall was reduced in width, the phase IIa ditch cleaned out, and the scarp consolidated with reinforced clay. Soon after c1660, the counter-scarp had collapsed and the ditch been partly back-filled. Further filling took place in c1680, the site eventually being levelled up in the late 18th century to accommodate a brick-built barn, incorporating remains of the modified wall in its foundations. Sometime around 1833 the medieval hall, west wing and cellared building north of it were

demolished, much material (including cellar walls) being salvaged. Cottages and additional farm buildings were subsequently erected.

Whilst the position of Radcliffe Tower is eminently suited to a moated site, the failure to recover evidence additional to that in trench C raises a number of problems, which can only be resolved by further excavation. The nature of the evidence from manorial sites like Radcliffe and Bury suggests that some moats or ditches were neglected during the late 14th century, to be replaced or modified on a grander scale in the 15th.

Whether the manor house ever possessed twin towers, as the licence might imply, probably also awaits an archaeological solution. A sketch drawn by John Albinson in the 18th century (Albinson 1770) disagrees in detail with the surviving tower, but since a number of pages are now missing from his sketch book, it must be used with caution. A good example of twin towers survives at Preston Patrick Hall in Cumbria, which also possesses a king-post roof similar to that which existed at Radcliffe (Smith 1964). The plank technique used in the construction of the hall at Radcliffe and also in evidence at Baguley and Smithill Halls, is discussed elsewhere (Smith and Stell 1960).

The western boundary of the site may never be found, since it probably lies beneath the modern road. Similarly, evidence for the eastern boundary has either disappeared with disturbances in ground level, or runs inaccessibly through the parish graveyard. The northern limit is now known, which leaves only the southern boundary to be determined.

Following the death of John Radcliffe in 1518 and the subsequent sale of the manor by Thomas Radcliffe, third Earl of Sussex, to Richard Ashton of Middleton in 1561, the house appears to have served as a gentleman's residence. In 1672 the Tower was leased to Richard Walker of The Cross, yeoman, and Richard Walker of Radcliffe Bridge, husbandman, for a term of seven years (Irvine MSS 99). The lease was evidently renewed, as Richard Walker who died in 1682 was styled 'de Tower'. Probably during this time the north ditch, having been maintained until then, was backfilled and its status as manor house reduced to that of farm.

APPENDIX 1: A PIECE OF POTTERY INDUSTRIAL APPARATUS

By S Moorhouse

This consists of two joining sherds, (Fig 6,3) forming about a third of the total circumference, in a coarse-grained, sandy fabric with buff core and salmon-pink surfaces, which are smoothed externally and rough internally. The sherd is unglazed but lightly-sooted externally. The thick body and internal striation-marks suggest a narrow neck and top: hence the form as reconstructed. The lower part has been knife-trimmed internally and under the base: suggesting that the body had been thrown as a conical form, with a base on the wheel, and subsequently cut above the base to the present shape.

The surviving profile suggests that the sherds could have come from a number of medieval ceramic forms. In various positions they could have formed the mouth of a trumpet, the base of a chimney-pot, or the base of a pedestal supporting a chafing-dish. For different reasons each of these suggestions are unsatisfactory.

The coarse character of the fabric, the technique of manufacture, and the sooting, suggests that the sherds come from a particular form of industrial vessel, an aludel. These were usually conical in profile with a wide base and a narrow neck of varying shape, but always with an opening or hole in the top. Manuscript illustrations show that medieval metal aludels appear to be consistent in form: usually a straight-sided cone leading to a narrow top. However a number of pottery versions in different shapes are known. In the British Museum, for example, is a tall near-complete conical aludel (B M acc.no 1915:12:8: 202) from an unspecified location in London. Probably five different types of aludel were found amongst the 150 near-complete pottery alchemical vessels from Sandal Castle, West Yorkshire. The ceramic vessels here formed part of a laboratory whose contents had been disposed of during the early 15th century (Moorhouse 1983).

Medieval craft and medical recipes show that pottery was used extensively in a wide variety of processes, often in conjunction with vessels in other materials (Moorhouse 1981). Those involved in the secret sciences, such as alchemy, often devised their own processes to achieve a particular result, as well as using certain forms of vessel in combination, each of which had to be of a certain material. The variety of forms used by a late medieval English experimenter are shown in a 15th century manuscript describing the alchemical processes (Harl MSS 2407). The very many scientific and industrial processes using pottery, and the particular requirements of each practitioner, is reflected in the growing number of industrial groups of pottery (Moorhouse 1972). Each has a distinctive range of pottery forms, some of which are unique to the assemblage, and these are used in differing combinations with vessels in other materials. It is therefore not surprising that the piece from Radcliffe Tower cannot be paralleled exactly by known industrial pottery.

APPENDIX 2: LIST OF CONTEXTS

Shallow stratification, with medieval levels only 200mm below the surface, was further complicated by 19th century foundations and drains. Much positive evidence had been removed by persistent stone robbing, and certain difficulties were experienced in discriminating between derived and redeposited loam, since they appeared homogeneous. Munsell colour names are used for fairly moist samples viewed in daylight; Munsell notations are included in the archive. Each trench was given a separate numerical sequence and features prefixed with the letter F.

Trench A (Fig 5)

- 1 Area of flagstone and setts starting 1m from S end of trench and extending for 2.5m; depth 130mm.

- 2 Dark reddish-brown topsoil 200mm thick extending throughout trench.
- 3 Area of crushed red brick 130mm thick in SE corner of trench.
- 4 Patches of reddish-black cinder 20-120mm thick scattered throughout.
- 5 Dark reddish-brown soil, brick and sandstone in layer 20-100mm thick; extending 7.5m from end of trench.
- 6 Dark brown gritty sand in layer 100mm thick by 2m wide along W side of trench.
- 7 Dark brown clayey sand up to 200mm thick adjoining layer 6.
- 8 Dark reddish-grey humus, brick rubble, lime and cinder up to 240mm thick, extending 3m from base of boundary wall.
- 9 Strip of cobbling 600mm wide by 90mm thick, containing cobbles up to 100mm in size, projecting 1.78m from W side of trench.
- 10 Area of crushed red brick 3 by 1.5m, in SW corner of trench.
- 11 Dark brown sandy gravel 100mm thick, associated with layer 10.
- 12 Dark brown loam with coal, increased quantities of pottery and window glass, in layer up to 120mm thick.
- 13 Dark brown sandy loam up to 140mm thick throughout trench.
- 13a Lens of ferruginous sand up to 80mm thick.
- 14 Dark reddish-brown sandy loam with sandstone and odd brick fragments.
- F15 Circular post-hole 400mm in diameter by 200mm deep, situated 1m from N end of trench and 1.1m from E side into 14.
- F15a Dark reddish-brown gravelly sand with brick fragments filling F15.
- F16 Rectangular slot 160mm long by 150mm wide and 200mm deep, projecting from W side of trench 3.5m from N end.
- F16a Dark reddish-brown gravelly sand filling F16.
- 17 Dark yellowish-brown loam with sandstone fragments, up to 260mm.
- 18 Dark brown sand and gravel with loam in upper part of layer, 300mm thick at N end of trench, extending 3m before tapering below layers 17 and 22.
- F19 Brick-lined drain with re-used roof tiles at base, covered with stone slabs; total width 520mm, internal width 300mm, depth 200mm.
- F19a Black silt contained within F19.
- 20 Area of cobbling 3m by 400mm.
- 21 Dark brown clay with angular fragments of sandstone.
- 22 Dark brown loam up to 200mm thick.
- 23 Dark brown clay with sandstone pieces, 200mm thick on scarp.
- 24 Dark brown silt 30mm thick under 23.
- F25 Modified sandstone rubble wall across trench; width 680mm height 700mm; 5 courses, top course containing 2 headers of millstone grit; bottom course of original wall 1:44m wide surviving behind projecting 760mm.
- 26 Dark reddish-brown loam 200mm thick under 20.
- 27 Dark brown loam with sandstone fragments in a layer 250-300mm thick.
- 28 Dark brown derived soil 260mm thick overlying natural gravel.
- 29 Dark brown sandy clay up to 100mm thick in centre of trench.
- 30 Dark brown gravel of undetermined depth.
- 31 Natural yellowish-red sand with iron stains.

Trench C (Fig 3)

- 1 Dark reddish-brown topsoil up to 80mm thick.
- 2 Area of cobbling 800mm square by 60mm deep with pebbles up to 150mm situated in SW corner of trench.
- 3 Floor of red bricks set on edge 1.5m wide.
- 4 Layer of concrete 100mm thick over an area 3 by 2.8m.
- 5 Area of red brick rubble 4 by 2.8m, up to 140mm thick.
- 6 Dark brown clay with humus up to 80mm thick.
- 7 Layer of black asphalt 40mm thick under 1.
- 8 Continuation of 6 with intrusive cinders in area of drains.
- 9 Dark brown sandy compact clay with small pieces of grey laminated sandstone in layer up to 200mm thick, cut by F15.
- 10 Layer of dark reddish-grey sandstone scapplings up to 250mm thick thinning laterally; also associated but protruding below layer were lumps of roughstone and an unweathered ashlar.
- 11 Dark brown sandy clay to a maximum depth of 400mm.
- 12 Patches of dark brown clayey silt 40mm thick merging with 13.
- 13 Dark brown silt with charcoal and burnt clay in a layer 100mm thick.
- F14 Small pit 50mm deep by 80mm diameter, sealed by 9.
- F14a Dark brown silty clay with sandstone fragments filling F14.
- F15 Rectangular 19th century pit 1.5m long by 800mm wide.
- F15a Dark reddish-brown loamy humus with coal and cinder filling F15.
- F15b As F15a, content of brick-lined feature cut into F15a.
- F16 Sewer trench with 160mm diameter pipe running east to west.
- F16a Dark brown clayey silt within F16.
- F17 Brick-lined drain 150mm wide internally, with stone covers.
- 18 Dark brown clayey silt.
- 19 Very dark greyish-brown organic silt, under 18.
- 20 Dark brown alluvial gravel of undetermined depth.

Trench F (Fig 4)

- 1 Dark brown topsoil up to 200mm thick throughout trench.
- 2 Layer of broken red bricks up to 160mm thick.
- 3 Area of cobbling up to 90mm thick throughout trench with cobbles up to 140mm long; merged into smaller patchy cobbles with clayey humus to a depth of 200mm.
- F4 Cable trench, continued from E, F7.
- F4a Dark brown contaminated loam filling F4.
- F5 19th century drain trench, continued from E, F9.
- F5a Dark brown loam, sandstone, brick and lime filling of F5.
- 6 Light grey laminated sandstone fragments with compact clay up to 50mm thick in patchy layer throughout trench.
- 7 Reddish-brown clay with sandstone scapplings forming patchy layer up to 100mm thick throughout trench.

- F8 Section of sandstone groundwall crossing NE corner.
- 9 Scatter of fine coal and charcoal 30mm thick across E half.
- F10 Elongated depression 120mm deep by 700mm wide extending 1m from N section.
- F10a Clay, burnt dark red, mostly contained within F10 but some spread over surface of layer 26.
- F11 Old service trench 440mm wide by 480mm deep, cutting F8 and F25.
- F11a Gravel and sandstone fill of F11 over iron pipe.
- 12 Reddish-brown clay with coal particles in layer 30mm thick.
- 13 Dump of dark reddish-grey sandstone scapplings up to 200mm.
- 14 Brown/dark brown clayey loam with fragments of sandstone roofing tiles in layer up to 150mm thick.
- F15 Circular hole 440mm diameter by 160mm deep against N side.
- F15a Dark reddish-brown humus, brick and lime filling F15.
- 16 Contaminated dark brown sandy loam up to 560mm thick.
- 17 Brown/dark brown clayey silt up to 200mm deep.
- F18 Vertical void 80mm diameter by 200mm deep projecting 300mm.
- F18a Dark reddish-brown clayey humus lining of F18.
- 19 Brown clayey silt projecting 1sq m from section.
- 20 Dark brown loam 200-300mm thick merging with 16.
- 21 Brown/dark brown sandy gravel.
- 22 Natural brown/dark brown sand.
- 23 Brown/dark brown gravel of undetermined depth.
- F24 Fragment of sandstone groundwall.
- F25 Sandstone rubble foundation.
- 26 Level area of compact brown/dark brown clay 80-120mm thick, contaminated with 9 and 10 a.
- 27 Brown/dark brown clayey loam up to 400mm thick, below 26.

BIBLIOGRAPHY

- Albinson, J 1770 Original sketch book, Bolton Library.
- Davey, P 1978 'Rainford Clay Pipes 1650-1750' Merseyside Archaeological Survey.
- Hallam, JS 1961 Excavation at the E's, Radcliffe, Lancs (unpublished manuscript).
- Hampson, CP 1940 The Book of the Radcliffes.
- Harl MSS British Library, Harleian Manuscripts 2407, fols 106 v - 11 (a miscellaneous volume of mainly alchemical texts of medieval and later date).
- Irvine MSS Transcripts and translations relating to Radcliffe in Radcliffe Reference Library.
- Kelly, JH and Greaves, SJ 1974 'The excavation of a kiln base in Old Hall St Hanley' Stoke-on-Trent Mus Archaeol Soc Rep 6.

- LRO Lancashire Record Office: Sessions Order Books Q50/2/66 (April 1697 Manchester).
- Moorhouse, S 1972 'Medieval distilling apparatus of glass and pottery' Medieval Archaeol 16, 79-121.
- Moorhouse, S 1981 'The medieval pottery industry and its markets' in D W Crossley (ed) Medieval Industry Counc Brit Archaeol Res Rep 40, 115-119.
- Moorhouse, S 1983 'The medieval pottery' in P Mayes and LAS Butler Sandal Castle Excavations: 1964-1973.
- Oswald, A 1969 'Marked clay pipes from Plymouth' Post Medieval Archaeol 3, 122-42.
- Oswald, A 1975 'Clay Pipes for the Archaeologist' Brit Archaeol Rep 14.
- Rutter, J and Davey, P 1980 'Clay pipes from Chester' in The Archaeology of the Clay Tobacco Pipe III, 41-272.
- Smith, JT 1964 'Cruck construction: a survey of the problems' Medieval Archaeol 8, 119-151.
- Smith, JT and Stell, CF 1960 'Baguley Hall' Antiq J 40, 131-47.
- Spencer, A 1950-1 'Preliminary report on archaeological investigations near Radcliffe, Lancashire' Trans Lancashire Cheshire Ant Soc 62, 201-3. See also unpublished plans and sections in Radcliffe Library.
- Tyson, N 1985 'Radcliffe Tower' in JSF Walker and AS Tindall (eds) The Country Houses of Greater Manchester, 47-51.
- Whitaker, TD 1876 An history of the original parish of Whalley and Honour of Clitheroe II, 291-3.
- White, AJ Undated Pele Towers of the Morecambe Bay area Lancaster Museum (undated).

