## Friars, Quakers, Industry and Urbanisation



The Archaeology of the Broadmead Expansion Project Cabot Circus, Bristol
2005-2008

Edited by Victoria Ridgeway and Martin Watts

PRE-CONSTRUCT ARCHAEOLOGY


The development of Cabot Circus shopping centre presented a rare opportunity for archaeological investigation of a large part of the Broadmead suburb of Bristol. The former presence of a Dominican friary and later Friends' Meeting House were well established and reflected in the street name Quakers Friars; structural remains of the meeting house and elements of the claustral buildings survive as scheduled buildings preserved within a large open piazza in the west of the new development. Further elements of the friary complex, including the church, chapter house and associated burials were revealed in various archaeological interventions around the area of the precinct, enabling a reconstruction of the precinct and its environs to be made.

Other aspects of the area's history were previously less well known and borehole survey has allowed the prehistoric environment of the River Frome's valley to be characterised. This has demonstrated that the slopes above the river valley were subject to episodic and smallscale clearance during the later Neolithic and early Bronze Age. The immediate hinterland of the Frome appears to have remained largely as mud flats until the development of the Broadmead suburb in the 12th century, and the arrival of the Dominican friars in the 13th century. Riverine access and the presence of flowing water would have been important assets for the industrial suburb, home to tanning, leatherworking, ironworking and cloth industries, which developed alongside the Frome throughout the medieval and later periods. The Dissolution of the Monasteries brought about major changes in the area of the friary. By the later 17th century the church and chapter house had been demolished, the surviving claustral buildings were occupied by trade guilds and the Quakers had built their first Meeting House.

The 18th and 19th centuries were times of enormous expansion for Bristol and large-scale development of land to the north and east of the former friary began in the early 18th and continued into the mid 19th centuries. These new developments were varied in nature, incorporating industrial premises, saw mills, cabinet works and malthouses, alongside domestic housing. Large dumps of tobacco pipe wasters were recovered alongside the remains of a kiln. The significant assemblage of pipes recovered has enabled the development of new typology for Bristol, which should prove invaluable in dating future assemblages recovered from the city.


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Front cover: Reconstruction of the Broad Weir area as it may have appeared from the Castle in the medieval period, by Jake Lunt
Back cover: Bakers' Hall and Cutlers' Hall preserved in the new development, looking north; excavating a burial in the Great Cloister of the friary; 17th-century tanning pit complex

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Edited by Victoria Ridgeway and Martin Watts

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### 4.8 Clay Tobacco Pipes

## Chris Jarrett

## Typology

An original objective of this project was to see if it was possible to refine the artefact typologies for clay tobacco pipes. This section presents a revised typology based on the results of excavation. The following section presents an analysis of the excavated assemblage.

## Methodology

The most useful typology to date for the classification of Bristol's clay tobacco pipes is that provided by Oswald (1975, 56-59, fig.9), but this has its limitations as many bowl types encountered from excavations in the city are not represented in that type series. To construct a new typology a large enough representative sample of the bowls found in Bristol had to be sought and this was provided by the Bristol Museum catalogue of bowls illustrated in Jackson and Price (1974, 88-113). This provided 294 bowls with makers' marks and these could be supplemented with illustrations from other publications (e.g. Oswald 1975, 56-59, fig. 9, Walker 1971). There is one drawback to the Bristol Museum catalogue in that the bowls dated later than $c .1770$ are mostly omitted, but as these shapes are fairly well understood (see Insole and Jackson 2000; Becky et al. 2001) then the accepted forms and chronology were used (Oswald 1975; Higgins 2004). The bowls were then measured for their maximum height, width, rim diameters and thickness of stems, while the angles of the bowl were also measured. The latter, however, is difficult to accurately calculate for bowls with asymmetrical profiles. It was hoped that this data would be useful in trying to separate out the bowls into different categories, but ultimately much of the data was not used. Illustrations were then used to sort the bowls into their different shapes.
Dating any typology accurately, clay tobacco pipe bowls included, is not an easy task to undertake and supporting evidence from the artefacts themselves, backed up with other independent data, such as other datable finds and the site stratigraphy is required. Clay tobacco pipe bowls are renowned for being one of the most sensitive dating tools available to post-medieval archaeology, as shapes change relatively quickly over the period of a couple of decades or so. However, until a sequence for a finds type is constructed as accurately as possible, then a degree of uncertainty to their precise dating will remain. A deductive methodology was employed to try and date the Bristol pipes as independently as possible, rather than take an inductive
approach based upon preconceptions about the size and shapes of the bowls. Makers' marks on pipes, whether just the initials or, more usefully, the surname or full name (which Bristol clay tobacco pipes fortunately display throughout their history of production), provide very useful dating for the bowl when the biographies of master pipe makers are known. However, despite the history, such as date of freedom, for most Bristol pipe makers being known, it is not always possible to determine when a particular pipe maker stopped working, whether it be through death, retirement or a change of profession.
Another potential difficulty in dating bowls by makers marks are that several contemporary independent pipe makers can share the same initials; furthermore there are occasions when 'dynasties' of a family operated in the industry. This was the case, for example, with the Robert Tippets I, II and III: father, son and grandson. Their working periods would have overlapped and during the sixty-year period when this family was in business the bowl types would have changed. The bowl of each individual Robert Tippet can on the whole be recognised (Price 1984). Despite this, pipe moulds could have been inherited and passed on to descendants or acquired and used by another pipe maker; Henry Hoare, who owned Robert Tippet III's moulds, additionally stamped the pipes made in these moulds with his mark, H H (Price 1984). Other pipe makers had very long working periods, such as Richard Nooney I (1655-1713) who operated for over 50 years, which can cause some bowl types to be perceived as having an overly long currency. It would have been unlikely that Nooney was using the same pipe moulds when he started his career as when he finished. Thus, moulds have a definite life span. Firstly, clay is a naturally abrasive material and with prolonged use would have worn away the mould and stamps. Secondly, in order to stay in business new moulds would have been purchased as trends in pipes changed, bowls got bigger and new shapes became more popular. A pipe maker was also likely to have had a range of different pipe shapes, as indicated by the different shaped pipes with the same initials and from named types in The Book of the Tobacco Pipe Makers and advertisements (Jackson and Price 1974, 83-85).
In order for the bowls to be dated as accurately as possible then only pipes with unique initials or names were used, unless it was known that a manufacturer with duplicate initials was working at a much later or earlier time and no confusion could arise as to who made the bowls. These criteria resulted in a sub-sample of $33 \%$ of the original sample of bowls studied, and this was useful for constructing the typology. It allowed for a table to be created for historically known pipe makers dated from the earliest to the latest, with their attributed marks and their associated shapes. This information was then applied to the Cabot Circus assemblage and the stratigraphic relationships between the bowl types further used to determine the chronology.

The evidence for the stratigraphic distribution of the bowl types is presented in the distribution section of the clay tobacco pipe report (see below). However, analysis of the stratigraphic distribution of the different bowl shapes showed that there was a considerable amount of residuality, with 17th-century bowl types occurring alongside 18th-century shapes and so on. None of the trenches in isolation demonstrated a complete stratigraphic sequence for the bowl types. However, the combined information from all the trenches does provide stratigraphic information to show that the typology generally works and that contemporary bowl types were found together. Other independent dating evidence from the Cabot Circus excavation had limited value for aiding the dating of the bowl types (summarised with the typology below). Of the coinage and jettons, only a single, residual Elizabeth I shilling was found in association with clay tobacco pipes in an 18th-century context: [20011], Trench 3. The pottery groups, where found with the clay tobacco pipe bowls did to a certain extent confirm the broad dating of the bowl types, but also further indicated which bowls were residual. Frequently the clay tobacco pipes were only found with undiagnostic sherds or long-lived forms in coarseware pottery with wide date ranges. This was particularly unfortunate for the early 17th-century clay tobacco pipe bowl types, where more refined dating was required to chronologically separate them.

Once the date range of each bowl type was determined it could be tested against other typologies. Those that are of use are Atkinson and Oswald's 1969 typology (here prefixed AO), which has on the whole stood the test of time fairly well and has only required a few adjustments (see Higgins 2004) and Oswald's 1975 Bristol preliminary typology (prefixed B), which unfortunately only used one bowl and its marking to apply the working dates of a single pipe maker to date the type. The use of the other bowl typologies does help to define the new Bristol typology to a tighter dating. The new typology is prefixed BRST.

A number of contradictions are apparent in comparing the different typologies. Atkinson and Oswald's 1969 typological dating flows in very neatly dated groups of bowls, whereas here there is a considerable amount of overlap in dating concurrent bowl shapes. The latter may be more realistic as contemporary bowl shapes may have developed independently of each other and others may have been in circulation sometime after new shapes were introduced. The only noticeable contradiction resulting from the methodology used here to date the Bristol bowl types with that of Oswald's 1975 classification is for the B3/BRST6 bowl shape which appears to be now later.

Oswald dated the B3 bowl on the basis that it was made by John Wall, 1619-c. 1650, but his wife Jane, could have made these pipes after his death, while other contemporary apprentices may possibly be responsible for these pipes once they became freemen. The methodology employed here dates the B3 bowl
apparently later than previously contemporary pipes: B1, B2, which were of a similar size, or later: B4. It is hoped that this typology will provide a more useful descriptive tool for future analysis of Bristol clay tobacco pipes and a basis for further refining the dating of the bowl shapes.

## The typology

The clay tobacco pipe bowl typology (Fig. 4.18) below is presented chronologically with information on who was most likely to have made the bowl shapes, while other uncertain individuals who have their marks on the bowls are shown in brackets. Dimensions and supporting evidence from the Cabot Circus excavation are also included.

## 17th century

The first pipe maker so far recorded in Bristol is Miles Casey, who had been working in the city prior to his death in 1617. Where he learnt his trade is unknown, but London seems probable, for that is where the industry originated at this time (Jackson and Jackson 1985, 2, 4). The earliest Bristol pipes imitate the London shapes (such as types BRST1 and BRST 2) and develop into later types: types BRST3 and 8 (Oswald 1975, 52). Regional idiosyncrasies of clay tobacco pipes start to emerge in the early 17 th century and in the counties of Devon, Dorset, Wiltshire and Bristol the 'chinned' bowls emerged (Oswald 1975, 52) such as type BRST6, which further developed successively into types BRST7 and BRST9. The 17th-century bowls generally have 'bottered' and or milled rims and makers' stamps (mostly incuse) found on the underside of the heel.

## Late 17th-early 18th century

Bowl shapes that can be recognised in London, such as types BRST12-BRST14, emerge in Bristol and appear from $c .1680$. At the end of the 17 th century milling of the bowl rims becomes less common and is more likely to be confined to the back of the bowl. From c. 1690 moulded cartouches containing the pipe makers' initials begin to appear and are usually found on the right side of the bowl, while incuse stamps are found on the back of the bowl, but both may occur together. Stamping on heels had largely gone out of fashion except for on the BRST13 bowls. Spurred bowls also emerge at this time, though they are known in London from c. 1610. At the same time the 'chinned' bowl tradition continues in the form of the larger BRST15a and BRST16 bowls while the rims become more horizontal and follow a national trend (Oswald 1975, 53). The American export type bowl (BRST17) also first appears and continues to develop with Bristol decorative characteristics throughout the 18th century and probably into the early 19th century.

## 18th century

The chinned characteristics of Bristol bowls continued to be maintained until c. 1740 as the BRST15 bowl. However, this disappeared as contemporary bowl shapes found in London were now copied in Bristol: types BRST18-20 and BRST22-23; but moulded cartouches and stamped initials on the back of the bowl demonstrate continuity of local style.

## Late 18th -19th century

Cartouches start to become less common and the makers' initials begin to follow the national trend for being in relief on the heels or spurs of the bowls, but stamping also continues to be used. All the late 18th and 19th-century bowls generally follow the London and national trends.

## Type

## Comments

## BRST 1

c. 1619-55


Angled, heeled bowls, short and fairly tubular with slightly rounded sides and a symmetrical profile. Smaller examples may be earlier.
Makers include: Richard Berriman, Edward Lewis I and Thomas Smith I (W C, P E, I P and I W).
Date range of pipe makers: 1619-1652.
Cabot Circus occurrences: present in Period 4 deposits, but not with contemporary pottery.
Comparable typologies: Atkinson and Oswald 1969: AO5; Oswald 1975:
OS4, B1.
Height 26-29mm, width $13-19 \mathrm{~mm}$.

Taller and more tubular versions of type 1 but with rounded sides.
Makers include: Richard Berriman, Edward Lewis I, Thomas Smith I, (E C, W C, I F, I H, N M, T Sand R T)
Date range of pipe makers: 1619-67.
Cabot Circus: present as a single unmarked bowl.
Comparable typologies: Atkinson and Oswald 1969: AO10, Oswald 1975:
OS5, B1.
Height $30-35 \mathrm{~mm}$, width $15-19 \mathrm{~mm}$.

Rare, heeled, upright bowls with fairly symmetrical rounded profiles but their greatest width is close to the top of the bowl. Angled rims.
Makers: (W C: William Carter, 1641-47, William Cooper, 1641-42, I W:
John Wall, 1631-48).
Cabot Circus: not recorded.
Illustrated in Jackson and Price 1974: ill. no. 289.
Height $31-33 \mathrm{~mm}$, width $17-19 \mathrm{~mm}$.

Angled, heeled bowls with an asymmetrical profile, having slightly humped backs and rounded fronts. The rims are angled and bottered.
Makers: C A, Richard Berriman, Edward Lewis I, (I W).
Date range of pipe makers: 1617-52.
Present in Period 4 deposits and only occurs in one context with pottery spot dated 1650-1780.
Comparable typologies: Oswald 1975: B2.
Height $30-33 \mathrm{~mm}$, width $18-19 \mathrm{~mm}$.

Fig.4.18 Clay tobacco pipe typology

Type

## Comments

BRST 2a


BRST 3
c. $1640-70$


BRST 3a
Mid 17th century


A variant with a more upright angled bowl.
Makers: (Philip Edwards I).
Date range of maker: 1649-83.
Cabot Circus: not recorded.
Illustrated in Jackson and Price 1974: ill. no. 81.
Height $26-29 \mathrm{~mm}$, width $12-17 \mathrm{~mm}$.

Heeled and angled bowls with a symmetrical profile and angled rims. Makers: Richard Berriman, Edward Lewis I, Humphrey Partridge, Thomas Monks, (W B, E C, W C, H F, I E, M, T M, A N, P E, F R, T R and I T). Date range of makers: 1619-1670.
Cabot Circus: present in Periods 4 to 5, and only occurs with pottery spot date 1830-1900 in Period 6.
Comparable typologies. Atkinson and Oswald 1969: AO10.
Height $24-33 \mathrm{~mm}$, width $17-22 \mathrm{~mm}$.

These bowls are rare but similar to 3 but differ in having a more upright bowl.
Maker: W W (William Williams I, 1639-1685).
Cabot Circus: not recorded.
Illustrated in Jackson and Price 1974: ill. no. 300.
Height 30 mm , width 19 mm .

Heeled bowls with a symmetrical profile but are distinguished by having a 'neck' before the rim. Variants may have a humped back and straight front or vice versa.
Makers: Richard Berriman, Richard King, Edward Lewis I, Richard Nooney I, Thomas Monks, Edward Lewis I, William Stringer (I N, I T, M, T M). Date range of makers: 1619-1713.
Cabot Circus: Present only in Periods $4 / 5$ and 5 and associated with pottery spot dated 1680-1780.
Illustrated in Jackson and Price 1974: ill. no. 182.
Height $30-39 \mathrm{~mm}$, width $18-22 \mathrm{~mm}$.

These, narrow heeled bowls have a straight back and rounded front, with sloping rims and tend not to be milled.
Makers: Flower Hunt, (I T).
Date range of makers: 1651-77.
Cabot Circus: not recorded.
Illustrated in Jackson and Price 1974: ill. no. 245.
Height $30-32 \mathrm{~mm}$, width $15-16 \mathrm{~mm}$.

Fig.4.18 Clay tobacco pipe typology


BRST 7
c. $1650-80$


BRST 8


BRST 9


BRST 10
c. 1660-90


Fig.4.18 Clay tobacco pipe typology

## Comments

Heeled, angled bowls with an asymmetrical 'chinned' profile: the back of the bowl can be straight or humped and the front of the bowl overhangs. The rims are mostly angled and bottered and or milled.
Probably earlier than type 8.
Makers: Flower Hunt, Jeffrey Hunt, John Hunt I, Thomas Hunt (G B, I T, I W, W W).
Date range of makers: 1650-77.
Not recognised at Cabot Circus.
Comparable typologies: Oswald 1975: B3.
Height $26-32 \mathrm{~mm}$, width $16-21 \mathrm{~mm}$.
These bowls are similar to type 6, but have humped backs and a more pronounced heel and overhang at the front of the bowl. Both horizontal and straight rims can be present.
Makers: Flower Hunt, Jeffrey Hunt, John Hunt I, Thomas Hunt (G A, P E, G H).

Date range of makers: 1650-1677.
Cabot Circus: present in Period 4 with pottery spot dated 1700-1710.
Comparable typology: Atkinson and Oswald 1969: AO16.
Height $26-33 \mathrm{~mm}$, width $16-22 \mathrm{~mm}$.
A taller version of the heeled type 3 type, with fairly symmetrical profiles and angled rims.
Makers: Lluellin Evans, Flower Hunt, Thomas Monks, Richard Nooney I, William Stringer (E B, W C, P E, I F, R K, M, T M, I N, A R, I T).
Date range of makers: 1650-1688.
Cabot Circus: present in Periods 4 and 6 with contemporary pottery spot dated 1600-1700, 1600-50, but also residual with 18th-century pottery groups.
Comparable typology: Atkinson and Oswald 1969: AO13, Oswald 1975: OS
6 , some are similar to the chinned B7.
Height $33-37 \mathrm{~mm}$, width $17-24 \mathrm{~mm}$.

This is a more elegant chinned shaped bowl with a pronounced heel, a rounded back and a high chinned profile front curving back to form a narrow rim diameter. Bowls can be decorated with initialled cartouches. Makers: (Richard Nooney I, Francis Russell I or II, Robert Tippet I or 2). Date range of makers: 1655-1713.
Cabot Circus: present in Periods $4,4 / 5$ and 6, but when with pottery then it is found with 18th- and 19th-century wares.
Comparable typology: Oswald 1975: B8.
Height $36-37 \mathrm{~mm}$, width $24-25 \mathrm{~mm}$.

This bowl shape is variable but mostly has a rounded/humped back and chinned front and is a taller version of the B5 type. The rims can be angled or nearly horizontal and the milling is less frequent and complete. Makers: John Abbot, Lluellin Evans, Richard Nooney I (R A, I E, 'I JENKINS', R T).
Date range of makers: 1651-1713.
Cabot Circus: Present in Periods 4, 4/5 and 6. Occurs with pottery spot dated to after 1650, but mostly residual with late 18th- and 19th-century ceramics.
Comparable typology: Atkinson and Oswald 1969: AO17.
Height $35-40 \mathrm{~mm}$, width $22-26 \mathrm{~mm}$.

Comments


BRST 12
c. 1680-1710


BRST 13
c. $1680-1710$

BRST 14
c. $1680-1710$


This is a rare type with a rounded, concave back and a pronounced heel and rounded chin and straight rim.
Maker: (Francis Russell I).
Date range of maker: 1669-98.
Cabot Circus: not recorded.
Comparable typology: Oswald 1975: B6.
Height 32 mm , width 22 mm .

These spurred or narrow heeled, angled bowls have a straight or slightly rounded back and front. Milling and stamping is largely confined to the back of the bowl. The rims are angled.
Makers: Robert Browning, Lluellin Evans (L 8 E, I H, T O and R T).
Date range of makers: 1660-1706.
Cabot Circus: recorded in Periods $4-6$ and with pottery mostly dated after $c$. 1650, but does include 18th-century groups.
Comparable typologies, Atkinson and Oswald 1969: AO19; Oswald 1975:
OS19.
Height $40-45 \mathrm{~mm}$, width $20-24 \mathrm{~mm}$.

Occasionally there are oversized examples. Incuse stamps are found on the underside of the heel.
Makers: Lluellin Evans, Edward Lewis II, Richard Nooney I (F R, T S, I T, R T).

Date range of makers: 1655-1722.
Cabot Circus: not recorded.
Comparable typologies: Atkinson and Oswald 1969: AO20; Oswald 1975:
OS8.
Height 36-42mm, width 19-23mm.

These bowls mostly have narrow heels and angled bowls with mostly sloping rims. They are further defined by their asymmetrical profile with a straight back and rounded front. Variants (14.a) have a splayed heel. Incuse makers' stamps are found mostly on the back of the bowl.
Makers: Richard Nooney I (P E, C H, T O, I S, R T).
Date range of makers: 1655-1713.
Cabot Circus: not recorded.
Comparable typologies: Atkinson and Oswald 1969: AO21; Oswald 1975:
OS9.
Height 38-43mm, width 19-23mm.

Fig. 4.18 Clay tobacco pipe typology

BRST 15


BRST 15a
c. 1690-1740


BRST 16
c. 1690-1720/40


BRST 17
c. 1690-1760


These spurred bowls are quite varied and can have straight, slightly rounded to humped or nearly so backs, but rounded front and fairly horizontal rims. Makers: Charles Chick, Henry Edwards, Isaac Evans, John Hunt II and III, Joseph Jenkins, John Macey (Massey) I, Maurice Phillips, Edward Reed/ Read, Robert Tippet II/ Henry Hoare, John Wilson (I A, A E,H E, I E, W E, I H, D I, I I, T L, I M, T MORGAN, E PEARCE, G P, I P, I S, W TAYLOR). Date range of makers: 1689-1740.
Cabot Circus: found in Periods 4-6 and found with late 17th- or 18thcentury pottery groups.
Comparable typology: Oswald 1975: OS21.
Height $39-45 \mathrm{~mm}$, width $20-24 \mathrm{~mm}$.

This variant has an angular 'chinned' profile and appears to be the spurred version of the type 16 bowl. However, many bowls could easily fall into both the rounded or 'chinned' types.
Makers: Thomas Morgan, John Wilson, (A. Williams).
Comparable typology: Oswald 1975: B10.
Height 42 mm , width 21 mm .

These broad heeled bowls can have straight or slightly humped backs but with a 'chinned' rounded sometimes angular front profile. They can be decorated with cartouches or incuse stamped initials on the back of the bowl or both. The rims are mostly horizontal but can be sloping.
Makers: Isaac Evans, Ezekiel Millard (I C, T D, W E, H H, I H, D I, I P, I S, R TIPPET).
Date range of makers: 1698-1715.
Cabot Circus: recorded in Periods 4-6 and associated with late 17th- and 18th-century pottery groups.
Comparable typology: Oswald 1975: B11.
Height $34-40 \mathrm{~mm}$, width $19-26 \mathrm{~mm}$.

These are the American export type bowl with no heel or spur. They are very variable in size but have symmetrical profiles and when decorated have mostly initialled cartouches. Early examples may have milling on the back of the bowl.
Makers: Isaac Evans, (I C, I E, I H, 'I JENKINS', I O, 'R TIPPET', I W). Date range of maker: 1698-1713.
Cabot Circus: recorded mostly in Period 4, but also Periods 5 and 6 occurrences and found with late 17th- or 18th-century pottery groups. Comparable typologies: Atkinson and Oswald 1969: AO24; Oswald 1975:
OS25-27.
Height $32-49 \mathrm{~mm}$, width $21-31 \mathrm{~mm}$.

Fig.4.18 Clay tobacco pipe typology

Type
Comments

## BRST 18



BRST 19
c. 1700-40+


BRST 20


BRST 21
c. 1730-40
 sloping. 1680-1750.

OS11. bowl. TIPPET)

OS12. 1730-50.

OS11. B15.

Narrow, pronounced heeled bowls with a straight or slightly curved back and rounded front usually with a cartouche and rims that are often slightly

Makers: James Jenkins, Ezekiel Millard, Edward Reed/Read, (I H, I I, I M).
Date range of makers: 1706-1739.
Cabot Circus: recorded in Period 4-6 and mostly with pottery spot dated
Comparable typologies:Atkinson and Oswald 1969: AO25; Oswald 1975:
Height $40-46 \mathrm{~mm}$, width $20-23 \mathrm{~mm}$.

Broad heeled bowls that are similar to no. 18, but have a squat heel and wider

Makers: Edward Reed/Read, (?Israel Carey I, I I/I JENKINS, I O, I P, R
Date range of makers: 1706-1739.
Comparable typologies: Atkinson and Oswald 1969: AO25; Oswald 1975:
Height $24-35 \mathrm{~mm}, 40-42 \mathrm{~mm}$, width $20-24 \mathrm{~mm}, 23-25 \mathrm{~mm}$.

This is a rare bowl type but distinctive by being an oversized version of type 19. Usually marked with incuse initials on the back of the bowl.

Makers: William Foord (B, T D).
Date range of makers: 1733-1741.
Cabot Circus: a single occurrence in Period 5 and with pottery spot dated $c$.
Comparable typologies: Atkinson and Oswald 1969: AO25; Oswald 1975:

Height 46 mm , width 26 mm .

This (sometimes long) spurred bowl is a development of the B11 bowl. Makers: William Foord (I H, I JENKINS, I O, I S, T M).
Date range of makers: 1733-1741.
Cabot Circus: found in Periods 4 and 5 and mainly with pottery spot dated to the early or mid 18th century.
Comparable typologies: Atkinson and Oswald 1969: AO26; Oswald 1975:
Height $42-50 \mathrm{~mm}$, width $20-25 \mathrm{~mm}$.

Fig.4.18 Clay tobacco pipe typology


BRST 23


BRST 25


BRST 26


Fig. 4.18 Clay tobacco pipe typology

This short heeled bowl has an angled straight back and rounded front.
Decorated with cartouches.
Makers: (I C, W N, I O).
Date range of makers: 1722-1829.
Cabot Circus: Found only in one deposit in Period 4 with pottery spot dated 1730-50.
Comparable typologies: Oswald 1975: OS12, B16.
Height $41-48 \mathrm{~mm}$, width $22-29 \mathrm{~mm}$.

These are essentially spurred bowls with a very symmetrical profile but rounded at the front towards the base of the bowl and have rims that are mostly near horizontal or with a back slope.
Makers: George Ebbery.
Date range of makers: 1721-1785.
Cabot Circus: Recorded in Periods 4-6 and mostly with mid 18th-century pottery groups.
Comparable typologies: Atkinson and Oswald 1969: AO26; Oswald 1975:
OS26, B17.
Height $41-54 \mathrm{~mm}$, width $20-26 \mathrm{~mm}$.

The shape of this bowl is similar to that of the B16, but is squatter and with a squared heel.
Makers: George Ebbery, Charles Moon, Anna Viner (A B, E B, I B, I C, I E, I O, W N).
Date range of makers: 1721-1805.
Cabot Circus: Present in Periods 4 and 5 and occurs with pottery groups dated 1740-1800, 1800-30 and 1830-1900.
Comparable typologies: Atkinson and Oswald 1969: AO27; Oswald 1975:
B18/19.
Height $38-45 \mathrm{~mm}$, width $21-27 \mathrm{~mm}$.

The bowl shapes are variable but usually have a straight back and rounded front. The spur is often rounded and the rim horizontal.
Cabot Circus: recorded in Periods 4 and 5 and present with several groups of pottery mostly dated to after 1825.
Comparable typologies: Atkinson and Oswald 1969: AO28, Oswald 1975:
OS24.
Height 42-43mm, width 28 mm .

Similar shapes to Atkinson and Oswald 1969: AO28 but with a heel and the rim slopes.
Cabot Circus: present in Period 4 and recorded with 19th century pottery groups, one dated after 1825.
Comparable typologies: Atkinson and Oswald 1969: AO29, Oswald 1975:
OS15.
Height $35-40 \mathrm{~mm}$, width 25 mm .



Irish type bowls, usually with a straight back, rounded front and a narrow square heel. Decoration is usually as moulded milling, Irish place names and symbols such as the shamrock and harp.
Cabot Circus: recorded in Period 5 with a pottery group dated to after 1810. Comparable typology: Atkinson and Oswald 1969: AO31.
Height $45-48 \mathrm{~mm}$, width 23 mm .

Fig. 4.18 Clay tobacco pipe typology

## Clay tobacco pipe makers' marks

An illustrated chronology of the clay tobacco pipe stamps from the Cabot Circus excavations is presented
in Fig. 4.19-Fig. 4.22. This series of makers' marks was established using the methodology for the bowl dating but additionally the stratigraphy was used to show which stamps were contemporary with each other.

## Catalogue of illustrated stamps

Fig. 4.19.1 W C, incuse heel stamp, bowl type BRST2: William Cooper, 1641-42, William Carter, 1641-47, context [1419].
Fig. 4.19.2 E L, incuse heel stamp, bowl type BRST3: Edward Lewis I, 1631-52, Elizabeth Lewis, 1652+, context [20107].
Fig. 4.19.3 E L, incuse heel stamp, bowl type BRST3: Edward Lewis I, 1631-52, Elizabeth Lewis, 1652+, context [20107].
Fig. 4.19.4 T: incuse heel stamp, bowl type BRST3, uncertain maker, context [1253].
Fig. 4.19.5 ?T P, incuse heel stamp, bowl type BRST4: Thomas Poyte (Poyce), 1634/56-80, context [1201].
Fig. 4.19.6 'JEFFRY H', incuse heel stamp, bowl type BRST7: Jeffrey Hunt, c. 1650, context [22059].
Fig. 4.19.7 R N, incuse heel stamp, bowl type BRST9: Richard Nooney I, 1655-1713, context [1221].
Fig. 4.19.8 R T, incuse heel stamp, bowl type BRST9, Robert Tippet I, 1660-82, context [251].
Fig. 4.19.9 P E, incuse heel stamp, bowl type BRST10: Philip Edwards I, 1649-83, context [20107].
Fig. 4.19.10 R N, incuse heel stamp, bowl type BRST10: Richard Nooney I, 1655-1713, context [20107].
Fig. 4.19.11 R N, incuse heel stamp, bowl type BRST10: Richard Nooney I, 1655-1713, context [1009].
Fig. 4.19.12 P E, incuse stamp on back of bowl, bowl type BRST10: Philip Edwards I, 1649-83, context [530].
Fig. 4.19.13 R T, incuse heel stamp, bowl type BRST12, Robert Tippet I, 1660-82, context [21024].
Fig. 4.19.14 'H EDWARDS', relief cartouche, bowl type BRST16, Henry Edwards, 1699-1733, context [21024].


Fig. 4.19 Clay tobacco pipe stamps, scale 1:1; stamps 2:1
Fig. 4.19.15 I H, relief moulded cartouche with initials above a bunch of grapes, bowl type BRST15, context [22008].
Fig. 4.19.16 I H, relief moulded cartouche with initials either side of an anchor, bowl types BRST15 and BRST17, context [22008].
Fig. 4.19.17 I H, relief moulded cartouche with initials either side of an anchor, bowl types BRST15 and BRST17, context [22008].
Fig. 4.19.18 'H EDWARDS', relief moulded cartouche, bowl type BRST17, Henry Edwards, 1699-1733, context [22008].
Fig. 4.19.19 'I ABBOTT', relief moulded cartouche, bowl type ? BRST15, James (Jacob) Abbott, 1676-1718, context [2156].
Fig. 4.19.20 N C, relief moulded cartouche, bowl type ? BRST16, several possible makers (see below), context [2156].
Fig. 4.19.21 I I WILSON', relief moulded cartouche, bowl type BRST15, John Wilson, 1707-22, context [1625].
Fig. 4.20.22 W * N, incuse stamp on the back of the bowl, bowl type BRST15, William Naylor 1722-35 or William Nicholas 1730-75, context [1164].


Fig.4.20 Clay tobacco pipe stamps, scale 1:1; stamps 2:1

Fig. 4.20.23 W N, incuse stamp on the back of the bowl, bowl type BRST15, William Naylor 1722-35 or William Nicholas 1730-75, context [20089].

Fig. 4.20.24 IP, relief moulded cartouche, bowl type BRST16, several possible makers (see below) context [20089].
Fig. 4.20.25 I E, relief moulded cartouche, bowl type BRST15, several possible makers (see below) context [22059].
Fig. 4.20.26 IS, relief moulded cartouche, bowl type BRST15, several possible makers (see below) context [293].
Fig. 4.20.27 II, relief moulded cartouche, bowl type BRST16, several possible makers (see below), context [324].
Fig. 4.20.28 NO , relief moulded cartouche, bowl type BRST16, maker not known, context [345].
Fig. 4.20.29 N O, relief moulded cartouche, bowl type BRST16, maker not known, context [2184].
Fig. 4.20.30 C H, relief moulded cartouche, bowl type BRST16, Charles Hicks, 1722-46, context [986].
Fig. 4.20.31 I W, incuse stamp on the back of the bowl, bowl type BRST16, several possible makers (see below), context [1070].


Fig. 4.21 Clay tobacco pipe stamps, scale 1:1; stamps 2:1

Fig. 4.20.32 I O B, relief moulded cartouche, bowl type BRST15, maker uncertain, context [20011].
Fig. 4.20.33 R C, incuse stamp on the back of the bowl, bowl type BRST16, several possible makers (see below), context [20136].
Fig. 4.21.34 Relief moulded cartouche with four dots, bowl type bowl type BRST16, context [385].
Fig. 4.21.35 II, relief moulded cartouche, bowl type BRST16, several possible makers (see below), context [385].
Fig. 4.21.36 and Fig. 4.21.37 R T, relief moulded cartouches and incuse initial stamps on the back of the bowl, bowl type BRST17, Robert Tippet II, 1678-1722, context [1321].
Fig. 4.21.38 'IOHN MASE' relief moulded cartouches, bowl type BRST18, two possible makers, see below, context [2032].
Fig. 4.21.39 B, incuse stamp with crown above the initial, bowl type BRST20, maker unknown, context [361].
Fig. 4.21.40 I * O, incuse stamp on the back of the bowl, bowl type BRST21, John Okeley I 1732-39 or John Okeley II, 1769-89, context [1201].

Fig. 4.21.41 I M, incuse stamp on the back of the bowl, bowl type BRST21, several possible makers (see below), context [1639].

Fig. 4.21.42 G E, relief moulded cartouche, bowl type BRST23, George Ebbery, 1721-85, context [20014].
Fig. 4.22.43 and Fig. 4.22.44 W F, incuse stamps on the back of the bowl, bowl type BRST22, William Foord, 1733-44, context [1321].

Fig. 4.22.45 W F, relief moulded cartouche, bowl type BRST23, William Foord, 1733-44, context [1321].
Fig. 4.22.46 TC, incuse circular stamp on the back of the bowl with a 'half cross' above and below the initials, several possible makers (see below), context [2597].


Fig. 4.22 Clay tobacco pipe stamps, scale 1:1; stamps 2:1

## The tobacco pipes

The excavations produced a total of 3377 fragments of clay tobacco pipes which can be separated into 703 individual bowls, 85 nibs or mouth parts and 2589 stems. Of note were three dumps of 18 th-century wasters that produced fragments of muffle from clay tobacco pipe kilns and possible kiln furniture. To date a Bristol clay tobacco pipe bowl typology has not been satisfactorily produced and previously bowl types were classified according to Atkinson and Oswald's 1969 London typology; this does not allow for the idiosyncrasies of the Bristol industry. A typology is presented above for the main types of bowls found in Bristol, but future research may further refine their dating. Further to this a chronology of the stamps and mouldings is also presented.
Clay tobacco pipe manufacturing was well established in the parishes of St James (the location of Cabot Circus) and the surrounding parishes of Castle Precincts, St Philip and St Jacob and St Peter. Several different pipe makers with the same initials could have been responsible for making a marked pipe and the locations of where they lived or worked has been included below.

## Early 17th century

Type BRST1 c. 1619-55. There are six bowls of this shape and all have full milling of the rim; one bowl is covered in a slag deposit. Only one bowl is marked:

W C: nicely burnished and with complete milling and an incuse oval stamp on the underside of the heel with the initials and scrolls above and below it (Fig. 4.23.1). William Cooper, 1641-2, William Carter, 1641-7.

Type BRST1a $c$. 1630-70. A single unmarked bowl is present with a damaged rim.
Type BRST2 c. 1619-55. Five bowls present, damaged to varying degrees, but all have half to full milling of the rim and are of a fair to good quality. Another fragmentary bowl may possibly be of type 3. Only one bowl (Fig. 4.23.2) has an incuse W C heel stamp (see the possible makers above).

## Mid 17th century

Type BRST3 c. 1640-70. Five bowls of this heeled bulbous type are recorded, generally of very good and occasionally of excellent quality, with three quarters to full milling. Three bowls have incuse stamps on the underside of the heel:
? T: A single example is marked with a T within a square surround (possibly representing T M: Jackson and Price 1974,103 ) but the bowl is a more bulbous variant.


Fig. 4.23 Clay tobacco pipes, scale 1:1, stamps: 2:1

E L: Two bowls bear the same incuse stamp of E L with scrolls above and below the letters (Fig. 4.23.3): a different variant to those in the Bristol Museum corpus (Jackson and Price 1974, 101-2). The maker is probably Edward Lewis I, known to have been working between 1631-52.

Type BRST4 c. 1640-70. Two bowls present, of which one is stamped ?T P, the forename being unclear (Fig. 4.23.4, see Fig. 4.19).

Type BRST7 c. 1650-80. A single example of this heeled, 'chinned' type of bowl has the incuse stamp 'JEFFREY H' on the underside of the heel. The stamp refers to Jeffrey Hunt, who is believed to have been a non-local pipe maker working in Wiltshire, possibly at Devizes (Atkinson 1971), whose bowls are frequently found in Bristol.

Type BRST8 1650-90. Five bowls present, one heelless example being of good quality with full milling. None are maker-marked.

Type BRST9 1660-90. Five bowls present, with variants that include two examples with splayed heels. Two are marked:

R N : one slightly larger variant with a circular stamp with leaves above and below the initials and the stamp cannot be paralleled exactly to the Bristol corpus (Price and Jackson 1974, 104). The maker is probably Richard Nooney I, 1655-1713.

R T: one bowl with incuse stamp on the heel, probably Robert Tippet II, 1678-1722, St James's parish.
Type BRST10 1660-90. There are 31 bowls of this heeled type with a bulbous profile, of variable quality, but mostly of a fair or good finish and usually with full milling of the rim. One variant is present with a more biconical bowl profile. Six bowls are stamped by four makers:

P E: two bowls with incuse initials, probably Philip Edwards I, 1649-83 or Philip Edwards II, 1680-1703, St Michael's parish. Although a number of stamps of this type are known in the Bristol corpus (Jackson and Price 1974, 96), these two stamps cannot be exactly matched (Fig. 4.23.5, see Fig. 4.19.9 and Fig. 4.19.12).

R N: two bowls with different incuse circular stamps with leaves above and below the initials, probably Richard Nooney I, 1655-1713, St James's Parish (see Fig. 4.19.10-Fig. 4.19.11, probably Jackson and Price 1974, 104, 193-94).

T O: one damaged bowl probably of this type with incuse initials stamped on the back of the bowl. Possibly Thomas Owen I: 1698-1725.

R T: Robert Tippet I, 1660-82, incuse initials on the heel.

## Late 17th to early 18th century

Type BRST12 c. 1680-1710. Eleven spurred bowls present, with either a quarter or half milling and a fair or good quality of finish. Shorter and taller variants are noted, but none are maker-marked.

Type BRST15 c. 1690-1740. Eighty-six spurred bowls, two of which show evidence for being wasters, but one is plain. There are variants, these being either taller or more rounded than the norm. A number are maker-marked and have cartouches and initials, sometimes accompanied with motifs on the right side of the bowl:

I A: one damaged bowl has an illegible name within a cartouche, probably representing 'I ABBOTT' for James (Jacob) Abbott, 1676-1718 (see Jackson and Price 1974, 88, no. 3).
I O B: one bowl has a cartouche containing three initials (see Fig. 4.20.32). Such bowls are difficult to assign to a manufacturer and may possibly refer to one or more pipe maker; there were numerous contemporary Bristol pipe makers for this bowl (Jackson and Price 1974, 29-30) and it may be that the master pipe maker wished to distinguish his pipes from the others by including his middle name.

C C: one bowl has a cartouche and 'C. CHICK' on the right side of the bowl (Oswald 1975, 56, fig. 9.10), for Charles Chick, 1697-1722, Temple Parish.
H E: one bowl has a cartouche and the initials. Another more elaborate design contains a hand within a bracket and a probable name around it but very similar to an illustrated example in Jackson and Price (1974, 93. no. 57) and therefore probably Henry Edwards, 1699-1731.
I H: one (possibly two) bowl occurs with a cartouche containing the initials and a bunch of grapes within an open border or brackets (see Fig. 4.19.15), while another three bowls contain the initials and an anchor (see Fig. 4.19.16), Neither stamp is known in the Bristol corpus, but the anchor example does occur on an American export. Another bowl has a poorly impressed incuse ?I H mark on the back of the bowl. There are a number of possible contemporary Bristol pipe makers who could have made these bowls (Price and Jackson 1974, 47-48), but John Harvey I, 1706-22 and his son John Harvey II, 1726-34 were both residents in St James's parish.

T H: fourteen bowls are present with the initials contained within a cartouche (Fig. 4.25.1-2) and one bowl appears to be a waster or second with the rim being warped or pushed flat resulting from poor stacking in the kiln. Probably Thomas Harvey, 1700-34, St James's Parish.
W N: two bowls are present with the incuse initials stamped on the back of the bowl (see Fig. 4.20.23), but only one has a star between the initials (see Fig. 4.20.22). Possibly made by William Naylor, 1722-35, St James's parish or William Nicholas, 1730-75, St James's Parish and Lewin's Mead.


Fig. 4.24 Clay tobacco pipes made by Robert Tippet II and III from layer [420], Trench 1a, scale 1:1, stamps 2:1

I S: one bowl has the incuse initials stamped on the back of the bowl (see Jackson and Price 1974, 107, no. 236). There are several possible makers of this bowl (see Jackson and Price 1974, 70), but John Squibb, 1705-34 was known to have been working in St James's parish.
?H ?T: one bowl has two illegible initials with a star incuse on the back of the bowl.

R T: two bowls with incuse initials on the back of the bowl, probably Robert Tippet III, 1713-22, St James's parish (Fig. 4.24.1).
? W: two bowls, one appears to be a variant of this shape; it has a disc in relief on the side of the bowl and the family name initial is unclear, while the spur appears to have been trimmed off. The second bowl is damaged and has an incuse stamp on the back of the bowl.

I W: One bowl with a cartouche containing 'I WILSON' (see Fig. 4.19. 21, Jackson and Price 1974, 113, no. 298) for John Wilson 1702-22.

Eight other bowls are present with cartouches but are too poorly moulded to read the initials. One bowl is marked with four dots within the cartouche.

Type BRST16 1690-1720/40. There are 53 bowls of this heeled, chinned type. Decoration on this type of bowl is either as stamped or relief moulded cartouches on the right side of the bowl. The makers are:

P ?: one bowl with a cartouche. The family name is illegible.

N C: one bowl with its spur trimmed but a cartouche is present with the initials. Either Nathaniel Chilton, 1703-1730, Nicholas Corner I, 1706, or Nicholas Corner II, who was an apprentice in 1739.

R C: one bowl with the incuse initials stamped on the back of the bowl (Jackson and Price 1974, 91, no. 37) Possibly Richard Carter I, 1706-?34, but also possibly Richard Cherrington, 1704-22 and others working slightly after the date range of this bowl type (Jackson and Price 1974, 36-37).

H E: one bowl with a cartouche containing the name 'H EDWARDS' (see Fig. 4.19.14), for Henry Edwards, 1699-1731.



Fig. 4.25 Clay tobacco pipes made by Thomas Harvey from layer [429], Trench 1a, scale 1:1, stamps: 2:1

I E: one bowl with a cartouche containing the initials but additionally with three stars over the letters and one in between them (see Fig. 4.20.25). Possibly made by Isaac Evans 1698-1713 or Jonas Edwards I, 1722-1754.

C H: One bowl, probably Charles Hicks, 1722-57, St Leonard's parish (see Fig. 4.20.30).

T H: Four bowls probably attributable to Thomas Harvey, 1700-34 (Fig. 4.25.3-6), though it is possible that the T on Fig. 4.25 .3 could be an I.
I H: one damaged bowl with a cartouche and 'I HARVEY' moulded around a star and made by John Harvey I, 1706-22, John Harvey II, 1726-34, St James's parish.

I I: two bowls with cartouche and initials (see Fig. 4.20.27). Possibly James Jenkins, 1707-38, St James's parish, but it is thought that there were possibly two contemporary pipe makers with this name by their different signatures in the Book of Tobacco Pipe makers (Jackson and Price 1974, 51). Other contemporary pipe makers are also known with these initials.

N O: four bowls with different cartouches, the first is poorly moulded and just contains the initials, the second bowl has dots above the letters and an internal discontinuous beaded border (see Figs. 4.20.28-29). The maker is not as yet known in Bristol but his pipes have been previously recorded in the city.
I P: two bowls with a cartouche containing the initials (see Fig. 4.20.24). There are a number of possible contemporary makers for this bowl who could include members of the Prosser and Poyte family (Jackson and Price 1974, 63). John Poyte III, 1707-39, St James's Parish.

I S: a single bowl with small letters incuse on the back. Possibly made by Joseph Stanford I, 1691-1722, John Squibb, 1705-34, James Stephens I, 1716-39 or John Sunderland, 1727.

R T: Two bowls occur with incuse R T stamps either on the heel underside or the back of the bowl but additionally there are four other bowls with the initials in a cartouche.
Probably Robert Tippet II, 1678-22, St James's parish (Fig. 4.24.2).

I W: one narrow bowl variant with a cartouche absent of initials but these are found on the heel in relief. A second very angled bowl is plain with an incuse I W stamp on the back of the bowl (see Fig. 4.20.31). There are a number of possible pipe makers for this bowl; John Wilson, 1707-22, St James's parish, John Wickham I, 1723-52, John Wickham II, c. 1719-39. Another bowl with a poorly moulded cartouche contains 'I WI...M...' may possibly have been made by Joel Williams, 1713-19.
?W W: Three bowls with a cartouche containing crowned initials but the forename letter is not clear. Possibly made by William Williams, 1708 or even William West, 1727-39.

LY: one bowl with cartouche containing these initials which cannot be linked to a pipe maker.
Three anonymous maker bowls have cartouches where the initials are possibly deliberately missing rather than being poorly moulded, while a fourth-bowl with a splayed heel has a cartouche containing four dots in a diamond pattern (see Fig. 4.21.34).
Type BRST17 c. 1690-1760+. There are 100 examples present of these American export type bowls. More often than not these bowls are decorated, usually with a cartouche and initials or symbols in relief.
T ?: a single bowl with an incuse stamp on the back of the bowl with the family name illegible. Possibly T H.
I C: A single bowl occurs with an incuse circular stamp and 'I C 10'. Israel Carey I, who was operating between 1757-1811 (Lewin's Mead and Castle Green) is credited with making this bowl type.
H E: one bowl with a cartouche bearing the name ' H . EDWARDS' for Henry Edwards, 1699-1731, St John's parish (see Fig. 4.19.18).

I H: one bowl with a cartouche containing an anchor and the initials (Fig. 4.25.7, see Fig. 4.19.17). There are several possible makers for this bowl (see Jackson and Price 1974, 48, 100, no. 144 and Type BRST16 above).
T H: one bowl with a cartouche and these initials, but the T could be a poorly moulded I.

R T: 17 bowls of this type: a number of variations occur and at their simplest they can have an R T incuse stamp on the back of the bowl or with a cartouche with the initials. Seven bowls have the cartouche with 'R TIPPET' in the centre (Fig. 4.24.3-4). Bowls with cartouches and
the incuse stamp can also occur together and there also poorly moulded examples present (see Fig. 4.21.36).
?Y H: a single bowl with a cartouche has these initials, but the forename is illegible.

## 18th century

Type BRST18 c. 1700-40. There are 54 examples, a number of which are maker marked, usually with a cartouche and the initials in relief on the right side of the bowl. One bowl is a waster and has kiln residue and muffle adhering to it.

T H: nineteen bowls with a cartouche, Thomas Harvey, 1700-34.

I I: one bowl with a cartouche (see Fig. 4.21.35). James Jenkins I/II, 1707-1738 or John Jones, 1733-34, both St James's parish.
J M: one bowl with a cartouche and the name 'JOHN MASE' (see Fig. 4.21.38). This pipe maker is not known in Bristol but this bowl has been reported in the city previously (Jackson and Price 1974. 102, no. 172).
I S: one bowl with a the initials in a cartouche (Jackson and Price 1974. no. 238). Joseph Stanford I, 1691-1722, Temple and St James's parishes, or John Squibb, 17051734, St James's parish, but other contemporary pipe makers are known in other Bristol parishes.
R T: eight bowls with a cartouche and initials. Robert Tippet II, 1678-22.
Type BRST19 c. 1700-40+. Three unmarked bowls of this type are recorded.
T H: three bowls with a cartouche, Thomas Harvey, 1700-34 (Fig. 4.25.8-10).

R T: three bowls with a cartouche and initials. Robert Tippet II, 1678-22 R T: eight bowls with a cartouche and initials. Robert Tippet II, 1678-22 (Fig. 4.24.5-7).
Type BRST20 c. 1730-40. One bowl is present of this large, thick walled type. This has an incuse ' $B$ ' with a crown stamp on its back (see Fig. 4.21.39). This item is in a poor condition as it is burnt and its surfaces are spalled, so it may represent a waster.
Type BRST21 1730-40. This large, spurred bowl type with a 'chinned' profile is present as seven examples, including:
W F: one bowl with a cartouche and three dots below the initials (Oswald 1975, 56-57, fig. 9.15). William Foord, 1733-41/50.
?I M: one damaged but highly polished bowl with a cartouche (see Fig. 4.21.41). Possibly John Macey (Massey) I, 1700-33, John Macey II, 1723-27, both Temple parish or James Mathew, 1723-39, St James's parish.

I O: a single bowl with I * O stamped incusely on the back of the bowl (see Fig. 4.21.40). This stamp is also known on a contemporary heeled bowl (Jackson and Price 1974, 105, no. 199). John Okeley I, 1732-39, Hollister Street, St Michael's parish.
?I W: two damaged bowls with cartouches. One is smaller than normal for the type. John Wickham I, 1723-52, John Wickham II, 1728-39.

Type BRST22 c. 1730-80. Eight bowls are present, defined as heeled with a straight back and rounded front and only five are marked:

W F: five bowls and most are burnished, with an incuse stamp on the back of the bowl but there is a narrower variant (see Fig. 4.22.43-44). William Foord, 1733$41 / 50$, Temple parish.
Type BRST23 c. 1730-1800. Twenty-one bowls identified as a spurred type with a horizontal rim. One damaged plain bowl has clear glaze drips on it and represents a probable waster.

I C: six bowls and five are identical with a heart shaped cartouche and on the back of the bowl a circular stamp with leaves and scrolls and 'CAR[Y]'. A second bowl type was made in a worn mould and has a cartouche with an incuse I C stamp on the back of the bowl and a poorly executed 'I C' on the back of the bowl and a ' $C$ ' and a scroll on the front of the bowl. Israel Carey I, 1757-1811.

G E: one bowl with the incuse initials on the back of the bowl (see Fig. 4.21.42 ). George Ebbery, 1721-86, Lewin's Mead, St James's parish.

C H: one bowl with small, incuse letters stamped on the back of the bowl. This stamp has been recorded previously but is found on a heeled bowl (Price and Jackson 1974, 97, no. 108). Possibly Charles Hicks 1714-57.

I? I?: two bowls with cartouches and poorly moulded initials.

## Late 18th to 19th century

Type BRST24 1770-1830. There are eight bowls of this heeled type and they often have moulded relief decoration. One has a leaf border on the back of the bowl and a thistle border on the front. Another is poorly moulded and trimmed with a bent heel but has leaf borders on the front and back of the bowl, while a third bowl has fluting of the same size and on its front and back are leaf borders. Four bowls are maker marked:
?I ?C: two bowls both are plain, but one has an almost illegible stamp of the initials surrounded by scrolls. Probably Israel Carey I, 1757-?1811.

Y ?: one highly burnished variant bowl with a Y in relief on the left side of the bowl (Fig. 4.23.6).

I ?G: one bowl surviving has a heel and the family name is almost illegible. Possibly James George, 1821-32.

Type BRST25 c. 1820-60. Nineteen spur type bowls were found, with a wide variation in the shapes and sizes. Decoration is relief moulded and can be as fluting, but all of the same width, with (Fig. 4.23.7) or without leaf borders on the front and back of the bowl, while a single example has fluting with 'drapes' around the rim. Some bowls are plain but with leaf borders. One very decorative bowl has a diamond border around the rim, above a leaf border and fluting around the base of the bowl (Fig. 4.23.8). The finishing of these pipes can more often be quite poor with the seams not trimmed. Two bowls are more decorative. One is a short bowl with a sprawling leaf on its back, while the second is moulded in the shape of an acorn but with leaves on the front and back.

Type BRST26 c. 1840-80. Three bowls and fragmentary but all have the characteristic sloping rim and all are decorated with a broad rib that has moulded combed decoration.

Type BRST27 1840-1910+. There are four of these bowls without a spur or heel and all have moulded decoration but are not maker marked. Two bowls are of the thorn type (Fig. 4.23.9) but from different moulds and two damaged bowls have a basket type design. A fifth bowl has broad fluting moulded decoration and the seams have not been trimmed (Fig. 4.23.10). The sixth bowl may have a political theme as it features a possible woman on the right side and a male with a staff on the left side.

Type BRST27(f) One late 19th-early 20th-century damaged fancy type; a probable Turk's Head (Fig. 4.23.11).

Additionally there are three bowl fragments of a late 18th- or early 19th-century date with vertical ribbing and leaf borders.

Type BRST28 1840-1910. Two Irish-type bowls are recorded, one survives as a heel, marked with harps in relief, while an intact bowl has the characteristic moulded milling on the rim and a pointed spur (see Fig. 4.18.28).

## Non-local bowls

A damaged late 17th-century Broseley type bowl is present and is identified by its tennis-racket shaped heel.

## Decorated stems

Three isolated decorated stems are recorded all of which came from the Main Scheme excavations, one simply has rouletted notching around the stem circumference, a second (Fig. 4.23.12) also has bands of rouletted lines but surrounding an incuse ' X ' within a box. The third stem has a rouletted band of notched lines and a diamond border (Fig. 4.23.13).

## Clay tobacco pipe production material

## Saggar lid

What appears to be muffle may be a saggar lid formed of clay and dirt roughly mixed together and used to seal the top of saggars and so stop smoke from the fuel discolouring the pipes while firing.

## Muffle

There are a total of 51 fragments of muffle weighing 2926 g . Muffle was the inner clay tobacco pipe kiln wall that formed a barrier between the smoky heat and the clay tobacco pipes to stop the latter from discolouring. The muffle consisted of pipe clay, often reinforced with clay tobacco pipe stems and bowls. This material was recovered only from Trench 1a, layers [412], [416] and [429], the latter two deposits being associated with clay tobacco pipe wasters. All the muffle fragments bore impressions of stems or bowls.

## Distribution

## Quakers Friars North

## Period 3

A Period 3 demolition deposit to the east of wall [2237] of Building 2, Room 2 produced a small group of bowls dated to between 1660-90, as two type BRST10 bowls and a spurred bowl, probably a type BRST11. Within Cutlers' Hall, Building 4, floor [2184] produced bowl types dated to between 1690-1720, included four type BRST15 bowls and two type BRST16s with cartouches bearing the initials N O representing an as yet unknown maker (see Fig. 4.20.29-30).

## Period 4

In LP10a, levelling associated with the construction of the Friends' carriage drive produced a P E stamped type BRST10 bowl (Fig. 4.23.5). However, this deposit overlay a layer which produced later bowls, the latest being a type BRST15 bowl, dated 1690-1740. The earliest bowl found in this trench was a sole type BRST1, dated 1617-55 recovered from a waste pit [540] to the east of Building 2.

## Period 5

Of interest in this phase was the late 19th-century large Turk's Head bowl (Fig. 4.23.10) recovered from layer [12090] in TQF12 in Building 51, New Hall.

## Quakers Friars South

## Period 4

From DR6 deposit [22059] produced two bowls of note, firstly as a c. 1650-80 dated type BRST7 Jeffrey Hunt pipe (see Fig. 4.19.6) and secondly as a later type BRST15 bowl with a cartouche and the initials I E (see Fig. 4.25.25), probably for either Isaac Evans 1698-1713 or Jonas Edwards I, 1722-1754. In Trench 3, the twinchambered sandstone tank [21005] etc produced in its fill [21024] bowls dated to between 1690-1740, including type BRST15 and BRST16 bowls stamped RT and probably made by Robert Tippet II (1678-1722) and a type BRST16 bowl with a cartouche bearing the name of H[ENRY] EDWARDS (1699-1731) (see Fig. 4.19.13, Fig. 4.19.14). A Period 4 layer in Block 7 produced a type BRST23 bowl with a circular T C incuse stamp on the back of the bowl (Fig. 4.22.46).

## Period 5

In Trench 3 contemporary clay tobacco pipes within this phase were found in a number of features such as fills of the masonry drain [20038] beneath the floor of Building 59. This produced c. 1820-60 type BRST25 bowls that include examples with fluting, moulding in the shape of an acorn, and a possible late 19th-century Irish copy. Fill [20198] of the culvert for the River Frome produced more fragmentary examples of type BRST25 bowls. From Trench 2, the fill of the boiler mountings and chimney associated with the foundry, Building 53, produced residual bowls deposited between c. 1650-60 with single examples of types 1,2 and 3 and a possible type BRST8 heeled bowl. A Period 5 layer in Block 7 produced a type BRST27 bowl decorated with broad fluting (Fig. 4.23.10).

## Main Scheme

## Period 4

OA Evaluation Trench 13 contained 37 bowls, six of which are marked W F, probably for William Foord, 1733-41. Five of these bowls are of type BRST22 and have incuse initials on the back of the bowl, while the sixth bowl is of type BRST23 and has a cartouche with the initials W F (see Fig. 4.22.43, Fig. 4.22.44). The other bowls in this context are mostly of the American export type BRST17 six of which are marked with the initials RT (see Fig. 4.21.36, Fig. 4.21.37), both as an incuse stamp on the back of the bowl and within a cartouche, probably for Robert Tippet II (1678-1722).
Trench 1a contained three very important dumps of clay tobacco pipes that produced wasters and muffle. Layers [416] and [419] appeared to be contemporary as they both contained pipes marked T H, probably

Thomas Harvey, 1700-34 (see Typology, Fig. 4.18, above). Layer [420] appears earlier as it produced mostly wasters by Robert Tippet II, 1678-1722. Muffle was present in layer [416] as 433 g and in layer [429] as 2493g.

## Trench 1b

Nineteenth-century bowl types 25 and 26 were present in cesspit fills to the rear of properties south of Callowhill Street in Trench 1b. These were unmarked, decorated with either fluting or leaf borders and were poorly finished, so possibly indicating low status items. In Trench 2a a levelling layer also produced a highly decorated type BRST25 (Fig. 4.23.8) and a late 19thcentury type BRST27 bowl of the thorn type.

## Period 5

Very few clay tobacco pipes were contemporary with this phase in the Main Scheme areas of excavation. An exception was a Trench 1a drain fill which produced late 19th-century bowls of type BRST27 of the thorn type and an Irish bowl, type BRST28, with harps on the heel.

## Discussion

The clay tobacco pipe assemblage from Cabot Circus includes bowl types representing the full history of the Bristol clay tobacco pipe making industry with some
of the earliest pipe makers, Edward/Elizabeth Lewis and the as yet unidentified maker W C. Not all the 17th-century types included in the typology (see above) were encountered in the assemblage. It is possible that within Bristol there is a regional distribution of different types, i.e. certain parishes may have more of one type of pipe represented than others, as is the case for 17th-century London (Jarrett forthcoming). Future research on Bristol clay tobacco pipes may identify if there is a distinct distribution within the city of different bowl shapes dating up to the early 18th century, when pipes became uniform in their shapes. This regionalism may be due to a pipe maker preferring to make one bowl shape rather than another and this preference may have been passed on to apprentices who may have then worked locally. However, such theories about distributions are subject to supply and demand from the customer. Where the locations of pipe makers' workshops can be determined the Cabot Circus assemblage does appear to contain more pipe made in the parish of St James or adjacent parishes, which on the whole indicates that pipe makers were supplying the local market. However, several of the pipe makers encountered here, such as Edward Lewis, Lluellin Evans, the Tippet family and Israel Carey I marketed further afield; they exported their product to America (Walker 1971, 7-9; Jackson and Price 1974, 84, fig. xi).
The quality of finish, presence of makers' marks and how fully milled the rims of clay tobacco pipes are, are all possible indicators of the socio-economic status of their owners. Fig. 4.26 shows the distribution of plain/ unmarked bowls and decorated or maker marked bowls in Periods 4 and 5 for the three different excavation


Fig. 4.26 Bar chart showing distribution of plain and decorated clay tobacco pipe bowls for Periods 4 and 5 across each of the three main areas of investigation
areas. What is noticeable is that there are very few tobacco pipes recorded in Quakers Friars North, Period 4 and even fewer in Period 5. This may reflect the fact that this location was the location of the Quakers Meeting House, where religious beliefs may have been intolerant of smoking and also of a school, where smoking is likely to have been limited. The low number of pipes with decoration (12\%) in Period 4 may also reflect the lack of ostentation shown by Quakers. The ratio of decorated to plain clay tobacco pipes is higher in Period 5. Similar circumstances are found at the Quakers' burial ground, Kingston-upon-Thames, which produced clay tobacco pipes and a wooden pipe tamper in graves, but these may have been dropped by grave diggers. Of the 22 bowls recovered there, only one was decorated and two were maker-marked (Barber 2007, 131); no definite 19th-century pipes were found but this may reflect the decrease in the number of burials during the 18th century.

Across all areas of the site, in both Periods 3 and 4, there is a greater number of plain bowls compared to maker-marked or decorated examples and this may reflect the norm for most archaeological excavations. In Main Scheme Area 2 there is an increase in the number of marked or decorated pipes in Period 5, when compared to Period 4, which may indicate a change in the socio-economic status of the residents and reflect the presence of commercial properties. The clay tobacco pipes from Main Scheme were mostly recovered from dumped deposits and therefore probably not associated with the people who lived there. However, here there is a decrease in the number of marked or decorated pipes in the 19th century (Period 5) when compared to Period 4. As the area covered by Main Scheme excavations was developed in the 17th and particularly the 18th century and included low status houses, it may be that the people who moved into the new properties were more affluent than those living there in the 19th century and the area had a low socio-economic status.
Turning to the quality of finish and milling of the 17th-century bowls, only information from Quakers Friars South is sufficient to make a statistically valid statement. Of the 27 bowls recorded as of 17th-century date, only seven bowls ( $25.9 \%$ ) were marked, while bowls with full milling were the most common (ten bowls or 37\%), while $44.4 \%$ (twelve bowls) were deemed to be of a good finish and $37 \%$ (ten bowls) were of a fair finish. Few were poorly finished, but the latter were sometimes maker stamped. The pipes from trenches in Quakers Friars South therefore might imply middling quality items and so reflect upon their owners' socioeconomic status. This pattern was seen across all the excavation trenches and therefore would imply that properties on both Broad Weir and Merchant Street were similar in their social standing. No value judgements could be made on the work force associated with the tanning industry structures located in Trench

3 and LP8h as very few pipes were recovered from this area. From both Quakers Friars South and Main Scheme it was noticed that a high proportion of the $c$. 1820-60 type BRST25 bowls were very poorly finished with the seams not trimmed, probably indicating an inferior low class product.

### 4.9 Metal and Other Small Finds

E. R. McSloy

The publication catalogue comprises selected items of individual interest or which are datable by form. The majority of clearly modern items (Period 5) are omitted. The full assemblage, amounting to in excess of 1100 items of metal, worked bone or glass (640 are small glass beads of the type described below, see Fig. 4.29.4), has been recorded on to a database, a copy of which is included in the archive. With the exception of items clearly identifiable as iron nails and some clearly modern items, the metal artefacts were x -rayed by a specialist conservator to assist in object identification and constructional details.
Objects associated with the excavation of the 19thcentury Tabernacle within Area 1b have been reburied with the human remains following study. Description of the recovered coffin furniture including decorative studs of iron or copper alloy, iron handles, iron end rings and decorative coffin plates, is contained in the archive. Miscellaneous fittings include nails, angle ties and split pins, the latter used to fasten the handles and end rings. Coffin plates occurred in thin metal sheet (iron or tin) and were in most instances highly fragmentary. X-radiography revealed no surviving lettering and it is unclear whether these plates represent name plaques (depositum) or were purely decorative.
The published assemblage was regarded of insufficient size and range for it to be set out according to function, and items are presented by material and location. In summary the objects reflect a range of utilitarian/ household functions as well as items relating to dress. There are in addition a small number of items relating to pastimes (including bone objects Fig. 4.30.2 and Fig. 4.30.3), which are probably parts of musical instruments), and possible Rosary beads of amber (Fig. 4.29.2) and jet (Fig. 4.29.3), which reflect a religious/ devotional use. The putative rosary beads aside, together with a book mount (Fig. 4.28.7) which may plausibly have come from a religious text, known use of the area by a religious community is not obviously reflected in the assemblage.
Object dimensions are included with each item description with measurements in millimetres (L. = length; W. = width; T. = thickness; D. = diameter).

