# EXCAVATIONS AT JEFFREY STREET, EDINBURGH: THE DEVELOPMENT OF CLOSES AND TENEMENTS NORTH OF THE ROYAL MILE DURING THE 16TH–18TH CENTURIES

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## 1 ABSTRACT

Excavations on the site of a former tannery to the rear of Edinburgh's High Street produced evidence for the infilling of medieval burgage plots from the 16th century onwards. Walls defining a terrace and a burgage plot boundary suggest a considerable investment in at least some of the backlands during the medieval period, but these structures later went out of use, corresponding to a widely documented decline in Scottish towns during the 14th century. During the late 16th century, substantial buildings with cellars on either side of a paved close represent the first appearance of the multi-storey tenement buildings that characterise much of the Old Town.

These buildings provide the basis for a discussion of the character of urbanisation in late 16th- and early 17th-century Edinburgh. The cellars were demolished and backfilled with refuse at different dates between the 1640s and 1740s. Finds from these refuse deposits are highly significant as a sample of changing consumption patterns during this period. During the 18th century the area appears to have declined in status and taken on a more industrial character; later, a tannery was established on part of the site by the 1830s, which expanded to cover much of the site by the 1880s.



Illus 1 Site location

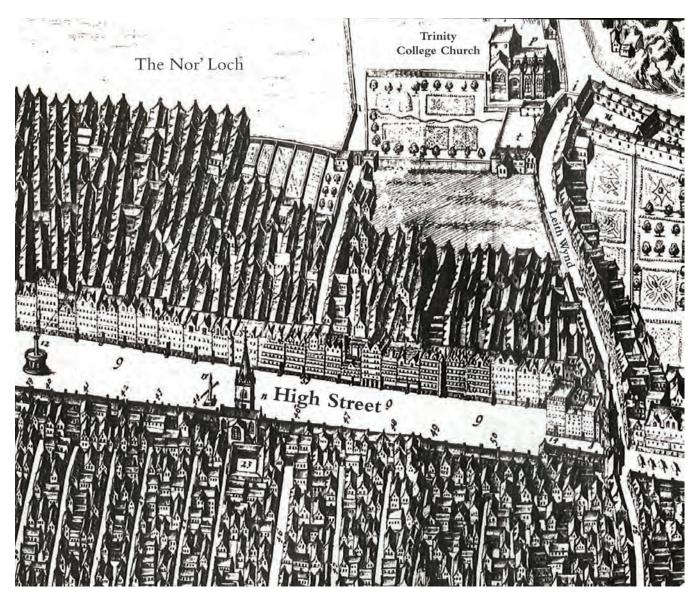
## 2 INTRODUCTION

The archaeological potential of a gap site previously occupied by a tannery, to the north of Edinburgh's High Street between Chalmer's Close and North Gray's Close (illus 2), has long been recognised (Stevenson et al 1981: 47). In 2002, development proposals prompted an evaluation (Masser 2002) which demonstrated that well-preserved medieval and early post-medieval remains survived in two parts of the site, referred to as Areas A and B (illus 1). More extensive excavation was carried out by Headland Archaeology in 2008, on behalf of Capital Land (Holdings) Ltd, as a condition of planning consent for development of the site. Only limited evidence for medieval occupation was found, due to extensive truncation by later structures, but domestic buildings dating to the late 16th and 17th centuries were better preserved, as were later structures including extensive remains of the 19th20th-century tannery. Post-excavation research has focused on the evidence for the early modern period, when the population, wealth and importance of the Old Town reached its height and its characteristic townscape of tall tenements and steep, narrow wynds took shape.

Edinburgh's Old Town occupies a 'crag and tail' landform created by the intrusion of the basalt plug of an ancient volcano into cementstone sedimentary rocks, followed by glacial deepening of the valleys on either side (Ruckley 1997: 15). The resulting ridge running east from Castle Rock is covered by a thin and uneven layer of glacial till. The High Street was laid out along this ridge, between the Castle and the Netherbow Port which separated it from the neighbouring burgh of Canongate. The land on either side, on which burgage plots were established, slopes steeply down to the valley of the Cowgate to the



Illus 2 A view of the street frontage on the High Street to the south of the site (Paisley Close is to the right of the Rabbie Burns Café Bar)



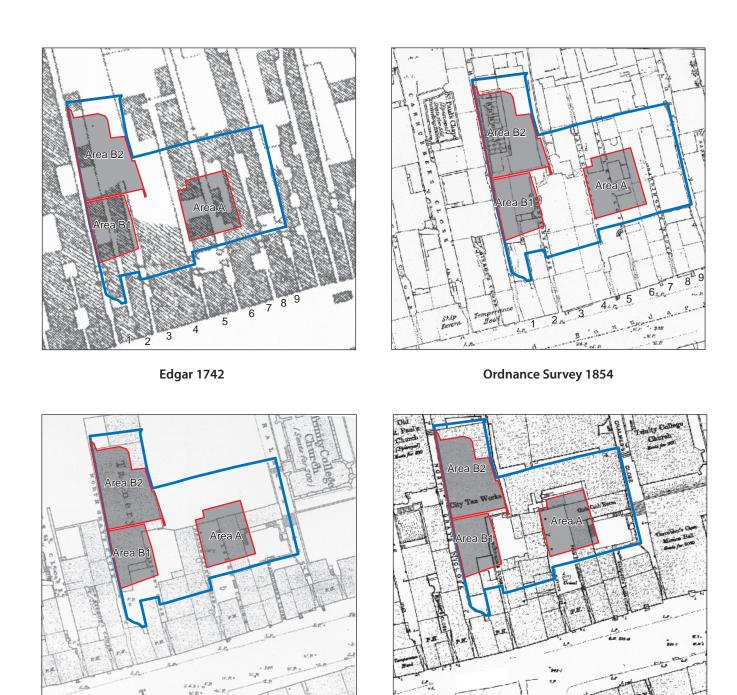
Illus 3 Detail from Gordon of Rothiemay's map of Edinburgh, 1647 (reproduced by Permission of the Trustees of the National Library of Scotland)

south, and to the Nor' Loch (subsequently drained and today the site of Waverley Station and Princes Street Gardens) to the north. Natural topography thus gave Edinburgh its dramatic setting but imposed difficult constraints on its builders.

The burgh was enclosed in the mid-fifteenth century by the 'King's Wall', the exact location of which has been debated. Schofield (1978) excavated what was thought to be the remains of the King's Wall approximately halfway down the slope between the High Street and the Cowgate. More recently, sections of walling and a substantial ditch have been excavated on the Cowgate itself (Jones 2010; Dalland forthcoming), which are arguably more convincing candidates. This was superseded by the Flodden Wall, built in anticipation of an English invasion in 1513, which ran further to the south. The Flodden Wall ran up to the Netherbow Port, and apparently continued from there to the east end of the Nor' Loch, which completed the north side of

Edinburgh's defences. While it seems likely that the King's Wall followed the same course, there is no positive evidence to support this assumption. It is also unclear whether the medieval burgh possessed any earlier system of defences, such as a ditch or palisade.

Until the eighteenth century, Edinburgh was limited in extent to this central ridge and the valley to the south where the Cowgate and Grassmarket formed a secondary axis of settlement. During the post-medieval period, the city became extremely crowded as its population expanded from an estimated 2,500 in the 14th century, to 12,000 in 1560, and double that by the 1640s (Whyte 1995: 172–3). Gordon of Rothiemay's detailed plan of 1647 shows the extent to which the burgage plots running off the High Street had been built up with multistorey town houses (illus 3). This is clearly the case for the north-east corner of the burgh, within which the tannery site is situated. However, it is clear



Illus 4 Map progression (map details reproduced by Permission of the Trustees of the National Library of Scotland)

from 17th- and 18th-century views of Edinburgh that much open ground remained between the properties to the north of the High Street and the Nor' Loch, no doubt because of the extreme steepness of the ground (cf Slezer's 'Prospect of Edinburgh from the North, ca 1690', Barrott 2000: 16 and available online at http://digital.nls.uk/slezer/engraving. cfm?sl=58). At the foot of the slope, at the east end of the Nor' Loch, lay the Trinity College Church with its adjoining gardens, to the east of which

**Ordnance Survey 1881** 

Leith Wynd descended from the Netherbow Port towards the port of Leith.

**Ordnance Survey 1895** 

The construction of Waverley Station, completed in 1874, was accompanied by a major reconfiguration of the street layout, as Leith Wynd disappeared to be replaced by Jeffrey Street, curving round to the west across the backs of the former burgage plots. Trinity College Church was demolished at this time, and later partially rebuilt on a new site to the east of Chalmer's Close (illus 4)

## 3 DOCUMENTARY EVIDENCE

#### 3.1 Introduction

The site extended across nine burgage plots, from North Gray's Close on the west to Chalmer's Close on the east (numbered 1–9 on illus 4). The plots were consistently referred to in their sale details, called lawyers' protocols, by the surnames of previous owners, frequently those active in the 15th century, and this ownership history became fossilised within the later records. At its widest, Area B encompasses parts of three burgage plots: no. 1 (John Knox's); no. 2 (James Cant's or Alexander Harlaw's); and no. 3 (John Bonkill's or Duncan Wicht's), east of Morrison's Close. There is considerable confusion around Plot 3, which seems to be known interchangeably as John Bonkill's and John Baty's (eg PBF I (ctd), nos 153, 166, 638, 909), the records sometimes omitting Plot 4 (Barker's) altogether (possibly *PBF I* (ctd), no. 166; III, no. 570; IV, nos 427, 552, 579). This may be due to a sequence of plots with very similar names beside the Nor' Loch (PBF I (ctd), no. 763; III, nos 540–1; IV, no. 418, 520), and despite every effort, some ambiguity in this area has been unavoidable. Area A includes parts of Plots 5 (Hopper's) and 6 (Fish's). Plots 7 and 8 (Margaret Brown's) and 9 (Dunsyre's) lay between Area A and Chalmer's Close to the east.

While most of the plots referred to in the 16thand 17th-century documents can be reliably located, the four to six lands into which they were typically subdivided are much less easy to place. For this reason it is seldom possible to identify the structures excavated with specific buildings mentioned in the historical sources. Nevertheless, a detailed picture can be built up at the level of the development area as a whole.

In the account that follows, it should be borne in mind that burgage plots were also referred to at times as tofts or tenements: only later did 'tenement' acquire its current meaning as a building containing numerous flatted dwellings, occupying a single land within a burgage plot. Moreover, in traditional Scots usage a 'house' could also refer to a dwelling that formed part of a building – what we would today call a flat or apartment – and not just to a building occupied by a single household.

#### 3.2 The site and its general setting

On their initial layout, which was possibly as early as the mid 12th century (Tait 2006, 307), access to the burgage plots or tenements (tofts) was usually from a close on the eastern side. However, this pattern breaks down somewhat between Gray's and

Chalmer's Closes, possibly because of later redevelopment (Tait, pers comm).

The tenements' forelands, which here lay on the south, contained merchant booths fronting the High Street. Plot 9 (Dunsyre's), for instance, was occupied by tanner John Davidson in 1501 (*PBF I* no. 54). Although Davidson's is a 'fore vault' (suggesting stone), other shops were in wooden galleries on upper floors, frequently with taverns below their stairs (eg *PBF I* (ctd) no. 770).

The north ends of all the tofts were bounded by the wall, ditch or dyke of what is variously called the yard, place or orchard of Trinity College Church. At the northern edge of Plots 1–6 in the early 16th century, a common passage ran east—west, separating the plots' tail-ends from the church ( $PBF\ I$  (ctd) nos 153, 465, 638).

During the early-mid 16th century, 'great buildings', 'mansions' or 'great houses' feature on six of the plots (nos 3, 4, 5, 6, 8 and 9), as well as on Lindsay's and Napier's plots immediately adjacent (PBF I (ctd) nos 150, 636, 638, 909; III no. 372; IV nos 230, 426; PBK no. 135). These mansions may be remnants from an earlier, less urbanised phase of development. The legal protocols' wording seems to refer to the size of the buildings, rather than their status, but the two were probably usually coincident. None of these mansions are on the street frontage, but set back in the northernmost land, near the church, or around the middle of the tenement. These were presumably the choice locations before the area became heavily built up.

# 3.3 Occupants of the excavated areas in the 16th century

In 1501, Plot 1 (Knox's) was divided into at least five lands, including sisters Metta and Helen Knox's properties, and 'a tailing rig of waste land', suggesting the north was still unbuilt ( $PBF\ I$  no. 62). The same pattern is seen on Plot 2 (Cant's) in 1505, where the tail-end was sold ( $PBF\ I$  (ctd) no. 153). These are the only two of the five plots between Lindsay's tenement and Plot 4 without 'great dwellings' built on the northernmost land ( $PBF\ I$  (ctd) nos 638, 909; III nos 372, 515), testifying to the more open character of the area at this time.

Area A consisted of Plots 5 (Richard Hopper's) and 6 (George Fish's), on the west and east sides respectively of Paisley Close. The northern land within Plot 6 (Fish's) was empty waste in 1504, and in 1508 the whole of Plot 6 was put into the joint ownership of burgess Henry Preston and his wife, which suggests they were newly-weds (*PBF I* (ctd)

nos 124, 465). Plot 6 was connected to other Scottish trading burghs – Preston's wife came from a Dunfermline merchant family, and a burgess of Perth collected an annual rent from the northern land until 1511 (PBFI (ctd) no. 744).

In 1527, what may be Plot 6 is described as having an eastern (and western) booth, a lower floor used as a dwelling, two chambers immediately above with middle and upper stairs, and a neighbouring tile-roofed chamber (*RMS III* no. 491). This suggests there were at least three floors, and lofts are also frequently listed in other similar properties, such as neighbouring Plot 5 (which in 1526 had an 'unner hous hall chalmer kechin loft and ii sellaris', *PBF III* nos 776, 777).

Plot 5 belonged to Richard Hopper in 1504. He had a married, university-educated son, Henry, and another who held the chaplainry of St Roche in St Giles church ( $PBF\ I$  (ctd) no. 117). Henry's newlybuilt land lay about the middle of the burgage plot, three properties south of Trinity College and just north of his father's mansion, but Richard himself did own the commercial street-frontage of Plot 4 (John Barker's;  $PBF\ I$  (ctd) nos 360, 593; III no. 43).

The northern end of Plot 5 had been occupied by a waxmaker, who sold it to a smith in 1520, suggesting the colonisation of the former wastes by crafts and manufacturing (*PBF III* no. 43). However, Plots 8 and 9 (Margaret Brown's) contained 6 roods (about 111ft) of walled wastes, as late as 1527–30 (*PBF III* no. 880; *IV* no. 261). This suggests that industrial encroachment was progressing steadily but unevenly.

Just beyond the western end of the site, during the early 16th century, the Gray family, in their eponymous (North Gray's) close, owned the mansion and land, on the Lindsay of Covington tenement, beside the College wall. They sold it to Adam Lindsay in 1523, using a house in Plot 1 (Knox's) on the opposite side of the close as security (PBF) III, no. 372). During and before this period, Plot 1 (Knox's) was divided into five, but few of the owners' occupations can be identified with certainty, except Thomas Greig, flesher, husband of Helen Knox, in 1507 (PBF I (ctd) no. 349), and George Halkerston. He possessed the foreland and backland (PBF III no. 372, 681; PBK, no. 167), and is probably the merchant of that name, recorded as a burgess in December 1500 (Boog Watson 1930: 477).

The discovery in Area B of a Low Countries maiolica tile fragment, dated to the 1530s and from a very high-status building, suggests that a suitably wealthy householder lived in the vicinity. As discussed earlier, the space between Plots 1 (Knox's) and 4 (Barker's) is not easily separated from an identically named run of tenements further west, and under the same ownership (eg *PBF II* nos 39, 116; *III* nos 477, 540–1, 928; *IV* no. 520). However, it seems likely that Sir Adam Otterburn, whose Auldhame estate has recently been investigated by AOC Archaeology (Hindmarch 2005: 57–8), owned the second property on the west (or, just possibly, the

east) side of Bailie Fyfe's Close from at least 1520 until after 1534 (Plot 4, Bonkill's; *PBF III* nos 64, 65, 78, 186, 741, 873; *IV* nos 426, 427, 552, 579). This would identify the previously unlocated 'Bonkill's Close' as Morrison's (*PBF IV* no. 552; Boog Watson 1923: 152; Harris 2002: 98).

Otterburn was seven times Provost of Edinburgh, a vastly wealthy courtier, ambassador and politician (Inglis 1935: 1). From the early 16th century until his death in 1544, he also built and traded for himself, importing 'Holland' cloth, silk and Spanish iron (ibid: 43, 66). He collected the Scottish Queen Mother, Margaret Tudor's estate revenues, and was appointed James V's ambassador to Henry VIII in 1533 (ibid: 10–12, 45). Sir Adam was trusted with James's marriage negotiations, and acted variously as the King's Advocate, Senator of the College of Justice and Privy Councillor (ibid: 1–2, 9–10, 44). Otterburn, owner of five estates, was perhaps the most likely importer of the luxury maiolica, but there was another possible patron nearby.

Gavin Dunbar, Archbishop of Glasgow from 1524/5 to 1547, and Lord Chancellor of Scotland for much of that period, owned 'the Archbishop of Glasgow's tenement', and a land within it, on the west side of Carrubber's Close (*PBF III* nos 845, 911; *IV* nos 231, 243, 470). He probably also had the contacts and status to import maiolica tiles, but seems to have been less well-travelled than Otterburn (Dowden 1912: 343–9).

Intermediate between Carrubber's Close and the excavation was Bishop's Close, the name indicative of its clerical associations (Harris 2002: 91; Boog Watson 1923: 42). Here, the Dean of Christianity of Linlithgow owned the foreland of Lindsay's tenement from 1523 to 1525, excepting the under-stairs booth, which Robert Lindsay occupied himself (*PBF III* nos 419, 629). Brief mentions of the neighbourhood in the later 16th century show a skinner's mansion in the middle of Lindsay's tenement, its yard bounded by 'the Spiners Wall', (possibly corrupted from 'skinner's wall'; *PBG I*, Hucheson, 14 Feb 1558–59; Wood, 17 Mar 1560–61).

Similar uses and frequent changes of ownership are evident during the rest of the 16th century. West of the site in Carrubber's Close, the backland of Peter Marche's tenement, had dykes built by 1557, trees planted and flowers and herbs growing (*PBK*, nos 234, 269). This tenement was burnt by the Earl of Hertford in 1544, as was Turing's, east of the site, during the so-called 'Rough Wooing' by Henry VIII (*PBG III*, Ruthven, 24 Apr 1564; Mayne, 24 Aug 1565). This raises the question of whether the whole site, which lies between these points, would have been destroyed by the conflagration.

#### 3.4 The 1635 House Mails book and other 17thcentury sources

The next ready source of social and structural information about the closes and their inhabitants is

the House Mails book of 1635, recording the route taken by council tax-collectors gathering the town ministers' stipends. This gives a house-by-house record of householders across the site, albeit with some ambiguities of interpretation (ECA: HTB 1635). The social mix of the Old Town's multistoreyed 17th- and 18th-century buildings has become a commonplace in the teaching of Scottish history, and it is here fully borne out by the population descriptions.

Both Areas A and B in 1635 seem to contain similar types of inhabitants and industries. For both North Gray's and Morrison's Closes, the access to properties only on the west of the transe bears out Tait's model of single-width burgage plots with eastern closes (Tait, pers comm). This layout proposes that the 13th- and 14th-century tenements were usually on the west of their respective closes, and such passageways (theoretically) had no entry to the tenements on their east sides.

Lindsay's plot (west side of North Gray's Close) has been frequently subdivided, showing eight owners, numerous houses and a tavern at the Close head (ECA: HTB 1635, 201), and is populated by merchants, widows and single women. The two northern lands contained yards, one waste and one for working leather (ibid, 203). The west side of Morrison's Close, Plot 2 (Cant's) presumably included the access to Plot 1 (Knox's), unless it has been misidentified by Boog Watson (1924: 114). He seems to omit from his interpretation of the House Mails book the small, unnamed close shown west of Morrison's Close on Edgar's map of 1742.

Following Boog Watson's identification (Boog Watson 1924: 114), the western head of Morrison's Close (Plot 2) began with a 'little wooden chope [discussed below] ... a laiche fore hous thereunder', on the High St, and a turnpike house in the close (ECA: HTB 1635, 203–4). The resident proprietor was Duncan Arroll, a tailor, who died in 1653, and sold haberdashery, 'whyt iron panis uth[e]r naills and certane uth[e]r small comodities', in his booth (NAS, CC8/8/67/376).

Arroll let the abovementioned 'chope' to James Dishington (d. 1640), a 'pantoun heilmaker', who made the seemingly impractical and luxury commodity of heels for soft velvet shoes and slippers (NAS, CC8/8/60/266). Dishington had at least one male and one female servant, despite his relatively modest circumstances – his disposable estate was worth only £100/6/3d (Scots) (ibid, p267).

Another of Arroll's tenants was John Charteris, who rented the High St booth above Dishington's, on the western close corner. Charteris's inventory lists his stock for 1639, which includes several stones' weight each of figs, raisins, small raisins, 'plum dames' (damsons), pepper, sugar, reams of 'small paper' (for wrapping goods), stuffing (for clothes?), 'skeinyie threid', or twine, four hanks of wire and other miscellanea (NAS, CC8/8/59/453).

In the middle of Morrison's Close was 'a waiste [with] old walls', and some flats where a 'whisler', or

musician, lived. The last three of Morrison's lands were unoccupied, being a ruinous house, a waste 'old walls all rouynous' and a final derelict yard 'all the close downe to the foote', (ECA: HTB 1635, 203–4). This would seem to indicate that a large part of the north of either Plot 1 or Plot 2, or both, which had previously been occupied, was now lying unused and neglected. Overall, this section appears to have declined in status compared to contemporary Bailie Fyfe's and Paisley Closes.

The west side of Bailie Fyfe's Close fronting the High St (Plot 4, Barker's) had a cellar, with stairs to a 'heigh fore booth' above (suggesting the previous century's multiple levels of shops remained; ECA: HTB 1635, 205). Within the close, Plot 4 was also partly owned by a cordiner's, or shoemaker's widow, with the distinction between a 'laiche hous' (or lower-storey dwelling) and a cellar carefully noted. Whether the diversity referred to the use to which such basement properties were put, or whether each was physically different and specialised (eg with or without a fireplace) is not clear. Some of the difference between 'heigh hous' and 'laiche hous' is presumably due to the steeply sloping site – 'up four steps northward' is sufficient for a house to be considered 'high', (ibid, 206), and other 'low' houses also have their own cellars, accessed separately from outside (ibid).

The foot of Plot 4 belonged to John Morrison, a very wealthy wine importer and seller. He himself lived in the most northerly house on the east side (Plot 5, Hopper's), near Trinity College (ECA: HTB 1635, 206). This contrasts with the wasteland at the north end of nearby Plots 1 and 2. Morrison spent several weeks on his sickbed between June and July 1642, during which time his wife discovered she had 'p[rese]ntlie c[on]ceavit' her fifth child, and he had to revise his will to provide for this unexpected arrival (NAS, CC8/8/60/397).

Morrison owned shares in three ships, a way to spread the risk to his capital (ibid, p394–5). He also lent money at interest to his titled customers, including Sir Harry Nisbet of Craigentinny, Sir James Nicolson of Cockburnspath and Sir William Dick of Braid (ibid, p395). He sold wine in Orchardton, Spylaw and Linlithgow, and had other business in Alloa and Burntisland (ibid). His success can be seen when his estate (moveables only) was valued at £19,607/16/8d (Scots), compared to nearby merchant John Charteris's estate of £72/13/– (Scots) (NAS, CC8/8/60/396; CC8/8/59/454).

A second owner of the east side of Bailie Fyfe's Close was Lady Manderston (probably Helen Arnott, wife of landowner Sir George Home; *RMS VIII*, no. 153) who held about six sublet houses (some of which were in the same building) and five cellars on Plot 5 (Hopper's). The other owner, Lady Prestongrange (a judge's widow), was herself a resident, in a 'turnpik hous' beside the eastern closehead, probably a house with its own internal staircase, rather than open forestairs to the street (ECA: HTB 1635, 206–7).

The House Mails book lists the next vennel,

Paisley Close, as having properties only on its west side (which would also be Plot 5, Hopper's), possibly fossilising the medieval layout identified by Dr Tait (pers comm) when tenements were normally accessed by individual closes lying to their east, an early example of central town planning. This suggests that by 1635 Plot 5, which lay between two closes, was accessed from both eastern and western sides, and thus the original entry pattern had broken down.

Paisley Close shows a similar mixture of interleaved buildings in multiple occupation, with flats on each floor accessed by turnpikes, or forestairs to high and low houses. Three of the owner-occupiers were merchants, with two and three cellars, or a yard at the close foot, and an advocate had similar cellarage (ibid: 209; Boog Watson 1930: 371). The street-front had more wooden shops, two of which had been converted into yet another 'laiche hous' (ECA: HTB 1635, 208).

#### 3.5 The 18th and 19th centuries

Documentary evidence for the later history of the site is less relevant to the theme of this paper, which is concerned principally with the early modern period; nevertheless a short account will be given to set the 18th- and 19th-century archaeological remains in context.

The directory of 1752, a modern compilation of residents' addresses from period sources, omits North Gray's Close. However, Miss Wightman's boarding school, with 23 (taxable) windows, occupied Bailie Fyfe's Close, as well as an upholsterer, skinner, lint dresser and optician (Gilhooley 1988: 66). There are many possible owners for the ceramic hair-curlers found in Plot 5 (Hopper's): one, a barber (David Clark, ECA: DoG 1773b) lived in the foreland of the same plot in 1773.

The other major source of architectural information after 1762 is the Dean of Guild Court processes, which dealt with all planning and building issues. Smith's Land, which appears to refer to the foreland of Plot 5 (Hopper's), with the open backland, was the object of dispute in 1773 (ECA: DoG 1773b). Many of the Smith's Land neighbours belonged to the same families as had lived there twenty years earlier.

In 1773, two upholsterers leased a former smithy in North Gray's Close (which side is unspecified) and built a workshop (ECA: DoG 1773a). Adair's map of 1742 shows a series of open yards on the east side in Plot 1 (Knox's), so it would seem that the ensuing dispute concerned this plot. They piled a saw-pit's spoil tip against the upslope face of the wall dividing them from the lower-lying northern property. Unfortunately, the excessive burden caused the 'mud' wall to collapse, covering a washerwoman's linens drying on the north, and destroying her business (ECA: DoG 1775). Her stock in trade was disparaged as 'a few triffling clouts being buried', and the court case as having 'no earthly purpose but to please the shagreen of a grasping neighbour'.

In 1774 another row involved a joiner who had affixed his shed to a merchant's house in Bailie Fyfe's Close (ECA: DoG 1774). Officials found a culvert full of 'coal gum' (ie coal dust) and blocked by stone where it ran beneath the shed. Two of the objectors were 'a single woman' and a 'widow woman', who gave their lone status as their reason for not previously trying to have the shed demolished. Eventually, the joiner left the close.

In 1790, Sir Stewart Thriepland 'apprehended some idle boys pulling the lead off the roof of his house', in North Gray's Close (ECA: DoG 1790). This suggests that not all of the 'gentry' had yet joined the exodus to the New Town, the building of which had begun before 1770.

A major building collapse in late 1861, which buried 35 people at the head of Paisley Close was an incentive for the wholesale improvement of the Old Town (Birrell 1980: 103; Mullay 1996: 273). John Lessels, who with David Cousin was the first architect to the City Improvement Trust after 1867, reported on the foundations of the neighbouring building in 1863 (on either Plot 4 or 5, it is unclear which). The walls inclined at 10 inches from the vertical, and the 'gable does not go down the whole depth of the sunk flat [basement] but is underfooted [undercut] a portion of the thickness', which left the foundations dangerously insecure (ECA: DoG 1863).

Most of the excavation was covered by the site of Hewitt's Tannery during the later 19th century, a period which has not been examined in this report.

## 4 RESULTS OF THE EXCAVATION

#### 4.1 Excavation methodology and phasing

The evaluation carried out in 2002 indicated very variable levels of archaeological preservation within the site. Building on the steeply sloping ground to the north of the High Street has generally involved extensive terracing, with buildings descending in a series of steps to the north and, to a lesser extent, the east, often resulting in removal of previously existing ground surfaces and structures. The area shaded on illus 1 comprised four terraced areas at the time of the investigation. Along the south edge, as far east as Bailie Fyfe's Close, the top terrace, retained by a modern brick wall, was unavailable for investigation due to the presence of a sewer and standing buildings immediately to the south of the site. Areas A and B1 were located on the second terrace, which was retained by a late 19thcentury stone wall along the north edge of Area A, and ended in a steep slope to the north of Area B1. Below this, the third terrace extended as far as the wall to the rear of the Jury's Inn Hotel to the north of Area A, and as far as a 19th-century stone retaining wall which formed the back edge of a yard to the rear of the tenement to the north of Area B2. This yard, and the area immediately to the rear of the hotel, formed the fourth terrace, at the same level as Jeffrey Street. Whereas the whole of Area A occupied a single terrace, the structures within Area B occurred at different levels (illus 23), and whereas earlier deposits often survived at the northern, downslope end of each terrace, they tended to be deeply truncated at the southern, upslope end.

Trial trenching identified two areas (A and B) where deposits or structures pre-dating the mid 19th century appeared to survive. Elsewhere, deposits of archaeological interest had been removed. A deep basement (relating to buildings shown on 1881 and later maps) was encountered to the east of Area A. To the north of Area A, and between Areas A and B1, modern building foundations were found immediately overlying truncated natural till deposits. Planning permission was therefore granted on condition that archaeological remains within Areas A and B were fully excavated.

The excavation took place between June and August 2008. Due to the 'land-locked' location of the site, which could only be accessed via the pend through the Jury's Inn Hotel, opposite Chalmer's Close, all spoil had to be stored on site, making it necessary to excavate the areas in succession, dumping spoil on areas that had been fully investigated. Work therefore started in Area A, moving on to Area B1 and finally Area B2.

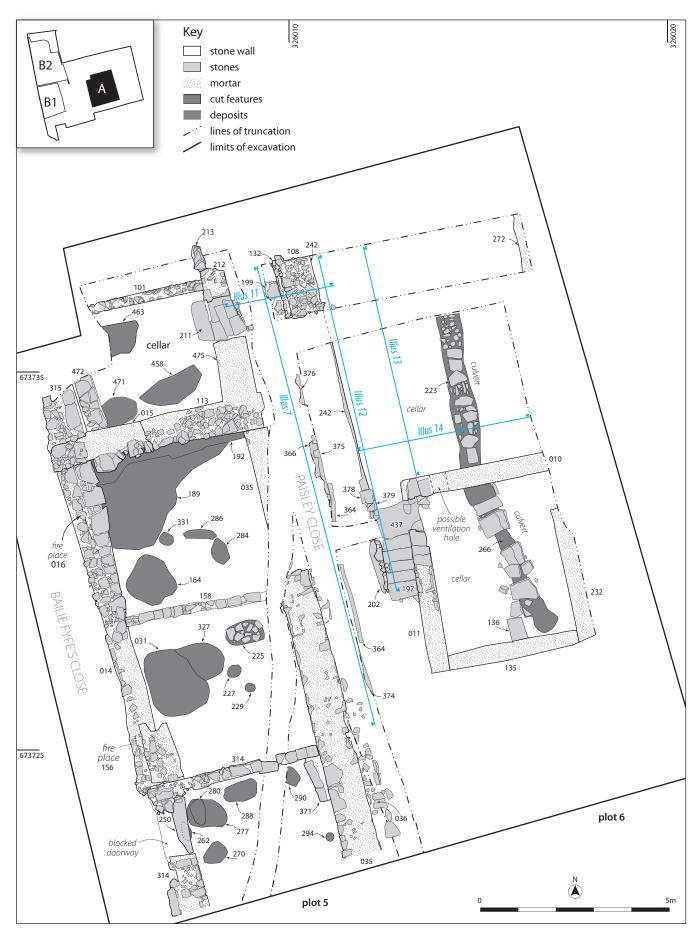
A detailed description of the excavation methods, as well as full descriptions of all excavated contexts and lists of photos and drawings, is given in the Data Structure Report (Masser & Kimber 2008) which has been deposited with the archive in the NMRS. The DSR also includes fuller discussion of later phases (particularly the late 19th/20th-century tannery) which are dealt with only briefly below.

The excavated remains have been grouped into four phases; however, given their distribution in two separate areas, and across a number of burgage plots and on different levels, exact contemporaneity between structures assigned to each phase in different parts of the site cannot be assumed. The sequences in Areas A and B are described separately below, since there is nothing to tie them together stratigraphically. In broad terms, Phase 1 denotes the period up to the late 15th/early 16th century, during which the backlands of the burgage plots do not appear to have been built up, and the evidence largely consists of pits and buried soil deposits. During Phase 2, the first substantial buildings on the site appear. Although the date of construction of these buildings is not easy to demonstrate, this coincides with the well-documented expansion of Edinburgh from the late 16th and 17th centuries. Phase 3, from the mid 18th to mid 19th century, saw widespread demolition and redevelopment on the site; further redevelopment in the late 19th century, assigned to Phase 4, followed the building of Waverley Station and the creation of Jeffrey Street, and included the expansion of the tannery over the western part of the site.

#### 4.2 Area A

#### 4.2.1 Phase 1: 13th to late 16th century

The earliest features in Area A were a number of pits dated to the 14th-15th centuries (shown alongside later features on illus 5). Pits 189 (containing deposits 188 and 329) and 164 (containing 163) contained late medieval White Gritty Ware sherds and nothing later in date; animal bone recovered from these features appears to derive from domestic waste. Pit 189 clearly pre-dated the earliest phase of buildings, as it was truncated to the north and east by foundation cut 192. Some of the other pits in this area produced no datable finds, but may also be medieval, notably 284, 286 and 331. The deepest pit, 189, was only 0.4m deep, but it is likely that post-medieval terracing has substantially truncated these features, since no trace of a buried ground surface was encountered and the pits were dug into



Illus 5 Area A: Phases 1 and 2



Illus 6 Area A, looking north from the existing north end of Paisley Close

stony till deposits that lay directly beneath post-medieval floor levels.

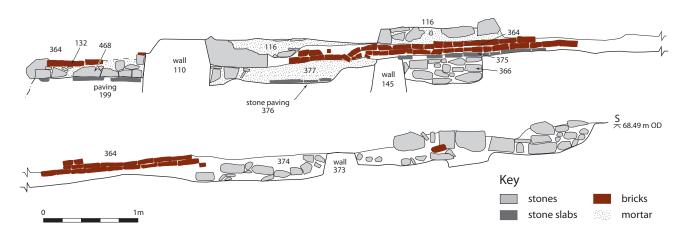
#### 4.2.2 Phase 2: late 16th to mid 18th century

Paisley Close - the old Close surface and culvert The former course of Paisley Close was clearly visible, running down the centre of Area A (illus 6). A late 19th-century sewer had removed most of its original surface. However, fragments of paving survived along the east side towards the north end, as Contexts 199, 375 and 376 (illus 7). There appears to have been a step in the Close between 375 and 376, as the fragment of paving to the north was 0.35m lower. The side walls of a culvert, running beneath the paving, were seen in places, consisting of up to four courses of roughly squared stone blocks laid without any bonding. A fragment of the east wall of the culvert, 366, can be seen in illus 7 and 8. The west wall is represented by 461 in illus 11, where a deposit of soft organic silt 460, formed by silting within the culvert, is truncated by the sewer trench 124. Further south, the walls

of the culvert were recorded as Contexts 036 and 374 (illus 5 and 6).

Plot 5 (Barker's) to the west of Paisley Close On the west side of Paisley Close, two early buildings within Plot 5 were partially revealed. At the north end, a cellar (illus 9) around a metre deep and bounded by walls 315, 015, 113, 475 and 212, was accessed directly from the Close by a flight of four steps (Context 211). Another cellar, extending to the north of a narrow internal wall 101 and to the west of wall 213, was truncated by the cut for a late 19th-century retaining wall that defined the north extent of Area A. The south wall of the cellar was built within a foundation cut 192, backfilled with deposits 191 and 479 which produced pottery as well as a copper alloy buckle, all of late medieval date, providing a terminus post quem of around 1400 for its construction.

The south-west corner of the cellar appears to have been rebuilt, since the west end of the south wall (Context 15) was clearly a separate build. Walls 015 and 315 were built over 471, an intensely



Illus 7 Elevation showing culvert, paving and wall facing along east side of Paisley Close



Illus 8 Paisley Close – east wall of culvert 366, overlain by truncated paving slabs 375, with brick kerb 364 above

heat-affected deposit within a shallow hollow. The rebuilding perhaps reflects the removal of a fireplace and chimney as part of a repair or remodelling of the building. Overlying 471, and abutting the rebuilt walls in the corner, was a fragmentary

rectangular stone slab 472, with a raised lip around the edge facing into the cellar: this may be the reused hearthstone from the original fireplace, but it is unclear what function it served in its final location. Two pits in the cellar floor, 458 and 463, may be



Illus 9 North cellar on plot 5 (west side of Paisley Close), facing south-west

contemporary with and related to the hearth. In particular, 463 contained abundant charcoal and fragments of oxidised clay.

The floor of the cellar was covered by a layer of black sandy silt (Context 160, not illustrated), which overlay the features in the floor. A diverse finds assemblage of broadly 17th-century date was recovered from this deposit, as well as the pits which it sealed, which indicates the approximate date the building was in use, although it does not give any specific indication of what the cellar was used for.

The cellar was backfilled – and the building above presumably demolished – around 1740. The key evidence for this date comprises a group of mallet bottles which may have been stored in the cellar at the time, rather than dumped in at the time of backfilling. The bottles, and the backfill deposits generally (Contexts 159, 104 and 103), are described by Franklin, below.

A second building to the south of this cellar was defined to the east and west by wall footings 014 and 035. This building was clearly later than the cellar to the north, since the west wall (Context 014) abutted wall 015 at its north end and overlay

the backfill of its foundation cut. Two internal walls (Contexts 158 and 314) divided the building into three rooms. Two fireplaces were set into the west wall: Context 016 at the north end, and Context 156 just to the north of wall 314. A doorway, which was later blocked (Context 250), was located in the west wall, opening onto Bailie Fyfe's Close, to the south of wall 314. Against the east wall, directly opposite the blocked doorway, was a dressed stone slab (Context 371) which may be a step into the building from another doorway opening onto Paisley Close.

In all three rooms of this building, the floors consisted of black sandy silt deposits (Contexts 119, 125 and 174, not illustrated), similar to 160 in the cellar to the north, directly overlying the natural subsoil. Finds from these deposits were mid–17th to early 18th century in date. While the floors of the north and middle rooms were at the same level, the floor of the south room was approximately 0.2m higher. These floor surfaces were about 0.2–0.3m below the surface of Paisley Close; nothing survived of the surface of Bailie Fyfe's Close to the west, which was presumably at a similar level to, or slightly higher than, Paisley Close.



Illus 10 Cellars on Plot 6 (east side of Paisley Close), facing south

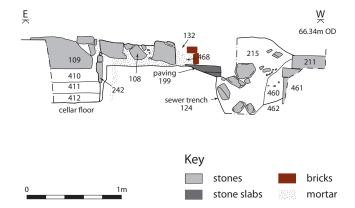
A number of pits were revealed beneath the floor deposits. Some of these, as previously described, appear to be truncated medieval pits, but others were probably excavated in the floor of the building while it was in use. Context 225 was a layer of large stones in a shallow hollow, scorched and covered by a layer of cinders, and is presumably the base of a hearth or furnace. Two intercutting pits, Contexts 031 and 327, contained high concentrations of cinder and burnt stone, suggesting a craft/industrial function perhaps related to Context 225. Several small pits in the south room (Contexts 262, 270, 277 and 280) are probably also related to activities within the building and contained loose cinder deposits.

Finds from the floor deposits and pits beneath range from early 17th to mid 18th century in date, probably accumulating during the period the building was occupied. Since there is nothing clearly post-dating the mid 18th century in the finds assemblages, it is likely that this building was demolished at the same time as the cellared building to the north. A layer of hard-packed rubble (Context 118) sealed the floor deposits in the three rooms, repre-

senting a levelling deposit for an open yard that replaced the building.

Plot 6 (Fish's) to the east of Paisley Close

A substantial building with two cellars, accessed via the same flight of steps, lay on the east side of Paisley Close (illus 10). The southern cellar was defined by walls 010, 011, 135 and 232. The north cellar was defined by wall 010 to the south, and 242 to the west; the east wall, with the exception of a small fragment at the north end (Context 272), seems to have been removed during construction of a later wall foundation which cut through the backfill of the cellar; to the north, context 272 was truncated by the cut for the late 19th-century retaining wall. The floors of the two cellars were at the same level, the slope of the hill meaning that the floor at the south end, beside 135, was 1.5m deep below the surface of Paisley Close, while at the northern limit of excavation it was no more than 0.4m deep. All these walls had a similar appearance, constructed from roughly shaped angular sandstone blocks bonded with



Illus 11 Section at north end of Area A, showing west wall of the north cellar on Plot 6, and paving truncated by sewer trench in Paisley Close

lime mortar, with smaller pinning stones used to fill gaps.

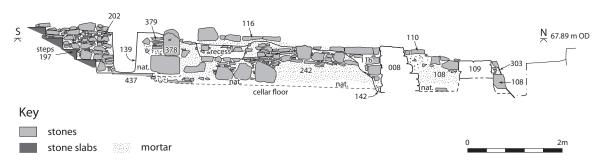
At the base of the steps (Context 197) that provided access to the cellars, a massive stone slab (Context 437) was built into the lowest courses of the cellar walls. From here, the doorway to the northern cellar opened between wall 010 to the east, and a square block of masonry (Context 378) to the west; that to the southern cellar between walls 010 to the north and 011 to the south. The ends of the walls were finely dressed with recesses for doorframes, very decayed remnants of which survived attached to 011. An iron hinge survived on the south face of wall 010, and a small circular hole for a bolt could be seen on the opposing face of 011, while a similar bolt-hole was also present on the face of 378: from these details it is clear that both doors opened inwards, but in opposite directions, both of them hinged against wall 010. The position of the bolthole indicates that the north cellar was bolted from the outside, as might be expected in the case of a storage cellar. Surprisingly, the bolthole for the door to the south cellar was on the inside, so if this room was also a storage cellar this may not have been the main entrance.

There does indeed seem to have been another door on the opposite side of the south cellar, as the east wall (Context 232) terminated to the north, with a gap about a metre wide between it and wall 010. A short length of wall, Context 136, projecting less than a metre into the south cellar from the south wall (Context 135), perhaps formed the base of an arch supporting the roof. The two cellars were connected by a square opening through wall 010 at floor level, about 0.5m wide, perhaps for ventilation, that was subsequently blocked with a stone slab; and by a stone culvert or drain (Context 266 and 223), which terminated in a circular pit to the south. A stony clay deposit (Context 274) appears to represent the original floor surface in the south cellar, at least part of which may have been cobbled.

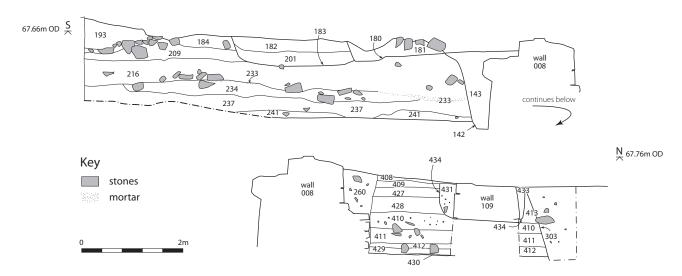
The west side of the cellar cut (illus 12) was faced with a single thickness of mortared stone (Context 242, continuing to the west of the steps as 379 and 202). A small recess near the south end of 242 represents a shelf or alcove in the wall of the cellar. Thus the external west wall of the building, which survived only at the north end as Context 108, was built from ground level only, unlike walls 011, 135 and 232, which rested on the cellar floor. The surviving fragment, Context 108, was faced with angular, roughly shaped stone blocks, with a core of earth and smaller stones, and overlay natural till deposits which had been cut away on the east side to form the cellar, and less deeply on the west side to form the surface of Paisley Close (illus 11). The east side of Paisley Close thus formed was faced with a rendered stone wall (illus 7: Contexts 377 and 468), in a similar style to wall 242. Above 377 and 468, and continuing further to the south, was a line of hand-made bricks (Contexts 132 and 364 – see illus 7, 8 and 11) that appear to be a facing or kerb against the outer wall of the building.

The floor of the northern cellar, between walls 010, 242 and 272, was covered with fine reddish-brown sand (Contexts 222, 241, 380 and 430 in illus 13 and 14; compare illus 15 for a photo of the west end of illus 14 section drawing). This floor deposit was relatively clean, with few inclusions. This may be compared with the floors of the buildings on Plot 5, described above, which were covered in black sandy silt deposits. In both cases, sand appears to have been imported to create a dry floor surface. The difference in colour and composition may derive from the presence of hearths and domestic occupation in the case of Plot 5, and use for storage in the north cellar of Plot 6.

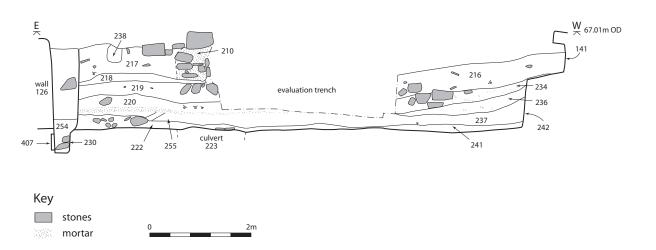
While secure archaeological evidence for the date of construction of the cellars on Plot 6 is lacking,



Illus 12 West wall of cellars on Plot 6 (east side of Paisley Close)



Illus 13 Deposits within north cellar on Plot 6 (east side of Paisley Close): east-facing section



Illus 14 Deposits within north cellar on Plot 6 (east side of Paisley Close): north-facing section

it is clear that the northern cellar, and the steps that provided access to it, had been backfilled by the middle of the 17th century. Overlying the floor deposits in the north cellar was a sequence of dark soil deposits that appear to consist of refuse dumped in the cellar (Contexts 205, 209, 219, 220, 221, 233, 234, 236, 237, 255, 381, 382, 383, 409, 411, 427 and 428; illus 13, 14 and 15). The finds evidence indicates that the bulk of this material was deposited some time after 1640, although the lowest deposit (Contexts 237, 255, 381 and 411), which had a distinct appearance, containing particularly large quantities of animal bone, pottery and other finds, could be somewhat earlier in date, perhaps 1600-20. While the different layers visible within the cellar backfill seem to indicate distinct episodes of deposition, these may have occurred over a short period.

Walls 109, 120 and 210, built over the backfill of the north cellar on Plot 6 (illus 16), match closely with a small rectangular building with a yard on its east side, shown on Edgar's map (1742) and 1st edition Ordnance Survey map (1854). The west wall of this building was presumably built over existing wall foundation 108, and a fragment survived further south as Context 141; elsewhere it had been removed by a later wall (Context 116). These walls were built within shallow foundation trenches cut through the backfill of the cellar (see illus 11 and 12, wall 109; and illus 14, wall 210), and were of random rubble construction, quite distinct from the more carefully built walls of the cellars they replaced. Only fragmentary remains of the floor surfaces within this building survived, and these appear to reflect several phases. A fragmentary cobbled surface (Context 208) was sealed by deposits 193 and 184 (see illus 13), and truncated by a pit 183, that all contained late 17th-century finds, apparently post-dating the backfilling of the earlier cellar by several decades. Later than these



Illus 15 Midden deposits overlying sand floor in the north cellar on Plot 6 (= west side of illus 12)

deposits was a layer of slag and cinder (Contexts 181 and 408), overlain by cobbles (117 and 109). This building may have been constructed immediately after the backfilling of the north cellar, in the mid 17th century, or maybe somewhat later.

#### 4.2.3 Phase 3: mid 18th to mid 19th century

#### Plot 5

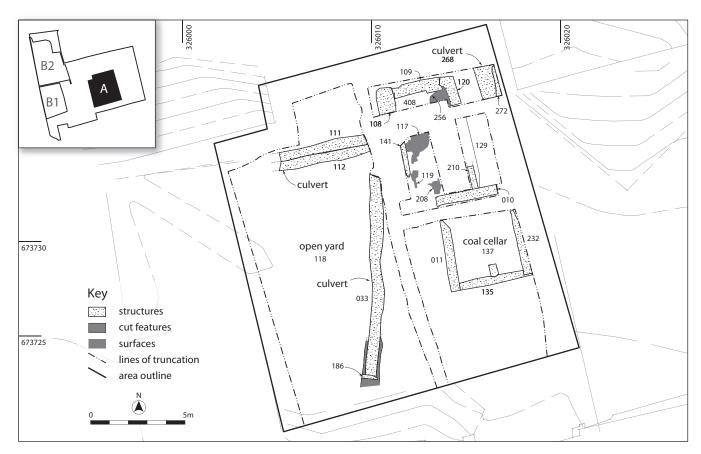
Following demolition in the mid 18th century, Plot 5 was occupied by a building to the north, with an open yard extending between Paisley Close and Bailie Fyfe's Close to the south (illus 16), as depicted on the 1st edition OS map. A stone-built culvert or box-drain (Context 033) ran diagonally across this yard, possibly converging with (or else replacing) the existing culvert beneath Paisley Close, and another culvert, Context 112, built over the backfilled Phase 2 cellar, probably joined it a little further to the north. A shallow stone wall foundation (Context 111) adjoining 112 to the north, is probably the south wall of a building shown on the 1st edition OS map extending to the north of the yard.

#### Plot 6

The cellar to the south of wall 010 seems to have remained in use during Phase 3. A layer of coal fragments (Context 137) on the floor suggests it was used for storing coal. Finds from the rubble (Context 138) overlying the coal layer indicate that the cellar was not backfilled until the 19th century. However, since the steps to the west had gone out of use, it was evidently being accessed from somewhere else, most probably the neighbouring building to the east through a doorway at the north end of wall 232. The cellar would have been located partly beneath a building set back slightly from Paisley Close shown on the 1st edition OS map, and partly beneath an open yard shown immediately to the south of this building.

#### 4.2.4 Phase 4: late 19th century

Comprehensive redevelopment followed the creation of Jeffrey Street, as can be seen from the 1881 OS map (illus 4). The building to the north of the yard on Plot 5 was demolished, and a new wall further to



Illus 16 Area A: Phase 3

the north (Context 110) now formed the boundary of the yard (illus 17). On Plot 6 a rectangular building, surviving as walls 363, 116, 008 and 126, was erected, with deep foundations of mortared rubble where it was built over the backfilled cellar (see illus 10, wall 126 at left edge of picture) but resting on the existing ground level on the west side. Trenches for two ceramic sewer pipes, 124 and 139, also belong to this phase, the former routed along the line of Paisley Close.

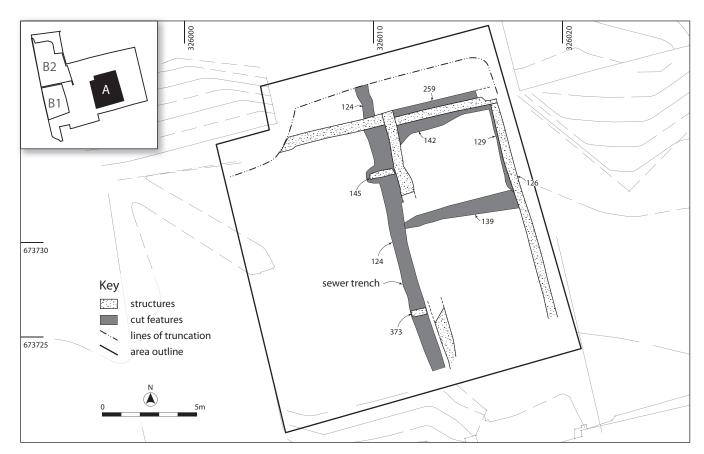
Somewhat later, the retaining wall that defined the north end of Area A, which appears on the 1895 Ordnance Survey map, was built. This formed the south side of a sunken courtyard to the rear of a new building, construction of which was responsible for removal of all earlier deposits to the north of Area A.

#### 4.3 Area B

#### 4.3.1 Phase 1: 13th to late16th century

Area B extended much further from south to north than did Area A, and the impact of post-medieval terracing on early deposits can be appreciated from illus 23, which presents a schematic section of the north-facing slope which it occupied. The medieval features shown in illus 18 survived at several different levels defined by later buildings terraced into the slope, and while in situ soil horizons and stratigraphy were often preserved at the north edge of a terrace, they were more deeply truncated where the south edge of a terrace cut deeper into the slope.

The most extensively preserved medieval deposits on the site were found at the north end of Area B, but only a narrow area was available for investigation due to the very great depth at which they occurred, which required the edges of the excavation to be stepped. A rubble-built wall 780, which is thought to be a burgage plot boundary, dividing Plots 1 and 2, abutted a more substantial wall (791), which may be a retaining wall for a terrace set into the slope of the hill. To the east of wall 780 was a rough and patchy cobbled surface 795, while on its west side the wall was cut into an old ground surface containing 13th-14th-century pottery. The walls are clearly medieval, as they were buried beneath a mixed soil deposit containing nothing later than 15th century in date. At least some of the material overlying the walls may be derived from the excavation of a linear cut (750), 3m to the south of, and parallel with, 791, which is thought to represent a widening or modification of the earlier terrace. Unfortunately, the relationship between the wall and this terrace cut was obscured by walls relating to later structures (shown on illus 20), but this sequence, if correct, suggests a temporary (and later reversed) amalgamation of the two plots, or co-operation between their owners.



Illus 17 Area A: Phase 4

A dark soil horizon (Context 670), containing medieval material, filled the backfilled terrace cut and extended over the area immediately to the south, but was progressively truncated further south by a floor surface associated with the 19th/20th-century tannery, bounded to the south by wall 564 (illus 22 and 23). Pits 698 and 743, cut through soil horizon 670, were backfilled with refuse deposits containing 13th–15th-century finds.

Isolated patches of the medieval buried soil horizon, and several pits, were seen further to the south. A late 19th/early 20th-century concrete floor 442 (see illus 23) had truncated any medieval deposits as far south as wall 046 (shown on illus 22), with the exception of a small patch of buried soil, Context 439, which survived towards the north edge. A group of intercutting medieval pits, Contexts 405, 406, 415, 417, 419 and 423, was found at a higher level to the south of wall 048. Pits 415 and 417 contained 13th–15th-century pottery, while the other features produced no finds but are probably of similar date. The ground surface at which they occurred was deeply truncated to the north, east and west by later structures, and the pits undoubtedly represent a small remnant of a formerly more extensive group of medieval features.

While the evidence for medieval activity in Area B is fragmentary, the presence of boundary walls and apparent construction of terraces at the north end indicates a considerable investment in the

backlands of the burgage plots during the 13th to 14th centuries. Later during the medieval period these structures were disused and buried, and the only other evidence for medieval activity is the accumulation of refuse and digging of pits. This may reflect a widely documented recession and decline in the fortunes of Scottish burghs during the later medieval period, and would be consistent with the documentary evidence which suggests that the north ends of both Plots 1 and 2 remained undeveloped at the start of the 16th century.

#### 4.3.2 Phase 2: 17th-18th century

#### Plot 1 (Knox's)

Edgar's 1742 map (illus 4) shows five buildings along Plot 1, separated by small yards. If we allow for inaccuracy of the map, which places all the buildings some 4–5m too far to the north, buildings 2–4 (numbered from south to north) correspond well with the excavated buildings shown on illus 19 and 20.

Walls 045 and 048 (illus 19) match the NE corner of Building 2 on Edgar's map. This building had a flagstone floor (Context 322), bounded to the south by a narrow wall 041, probably a partition wall between two rooms of the same building. The floor in the room to the south was in any case at a higher level and had been lost to later truncation.



Illus 18 Area B: Phase 1

An iron drainpipe had been inserted in a trench 332, cut through the flagstone floor, draining into a pit lined with a barrel (Context 352) which acted as a soakaway.

The north-east corner of Edgar's Building '3' may correspond to walls 523 and 526 (illus 20). A cobbled surface (498) covered much of the interior, overlying a levelling deposit 623 containing mid/late 17thcentury material. The cobbles abutted another wall foundation (576) to the north, which was observed to overlie wall 523, so it is possible that this represents the floor of a later building, or at least a remodelling of the existing one. A charcoal-rich deposit (497), overlying the cobbles, contained finds of 17th- or early 18th-century date. A cobbled surface (547), to the east of wall 523, is probably part of the surface of the close, which clearly existed (but was not named) at the time Edgar's map was made, and was subsequently built over. A V-shaped stone-built drain ran along the east side of this cobbled surface. Edgar's map shows a wall running across this unnamed close from the NE corner of Building 3, which may be the same as wall 546, which the cobbled surface abuts to the north.

To the north of Building 3, Edgar shows an open yard 8-9m long. A surface of compacted clay (Context 637) was exposed within this yard, cut by a 17th/early 18th-century refuse pit (757). Another massive pit (686), further to the north, contained refuse and rubble of 18th-century date with much residual material, including two maiolica tiles. On the east edge of 686 was a stone-lined tank (Context 689), 0.9m deep, with an opening to the west. This most likely functioned as a cess pit, although environmental samples from the lower fill (688), a very soft and waterlogged silt, were uninformative and provided no clear confirmation of this interpretation. Finds from the fill ranged in date from 15th to late 18th/early 19th century. If, as argued above, the cobbled surface 547 is part of the surface of the unnamed Close on the east side of Plot 1, this putative cess pit appears to be located beneath the line of the close: waste water presumably drained into it from the area occupied by the pit to the west, rather than from above.

Building'4' on Edgar's map matches quite well with walls 595 and 659, although the structure excavated here is clearly built over the line of the former close, abutting the neighbouring building on Plot 2, and may therefore be a later building replacing the one depicted by Edgar. The north end of this building was truncated and much of its interior disturbed by later insertion of tanning pits; the undisturbed area at the south end had a brick floor (Context 601), on top of which was a layer of charred timbers (Context 602), the majority of which were aligned east/west, and which therefore probably derive from a roof or upper floor that collapsed when the building burnt down. This layer contained 18th/19th-century finds; this dating evidence would be consistent with a fire which is known to have destroyed an early tannery on the site in the 1860s, as discussed below.

Plot 2 (Cant's/Harlaw's)

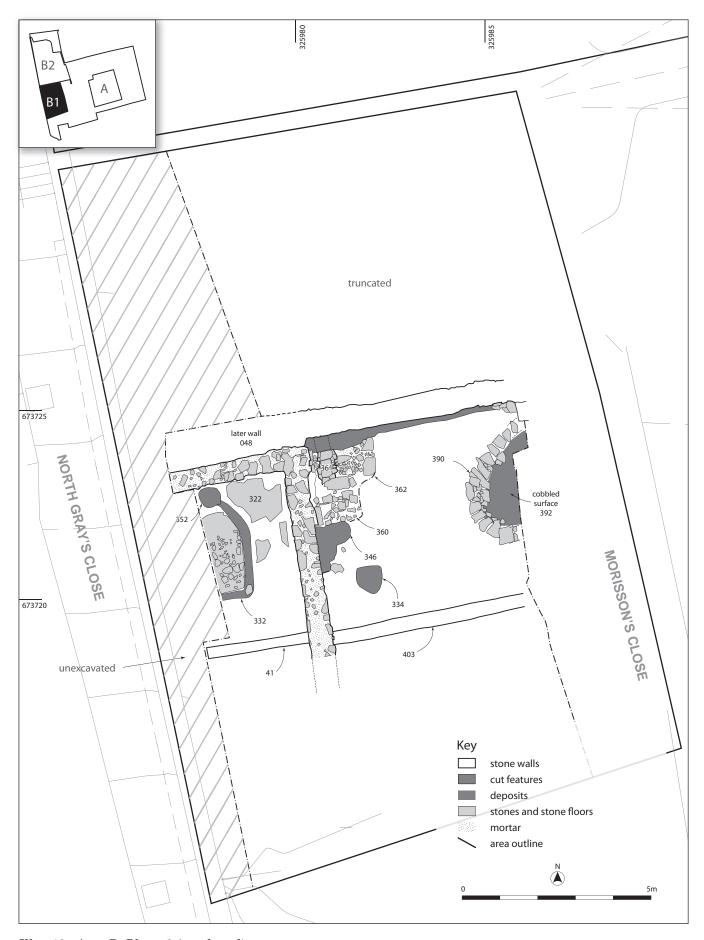
Edgar's map shows Plot 2 as continuously built up from the High Street frontage as far north as Building '3' on the neighbouring Plot 1. This plot lacked the close correspondence with the map evidence seen on Plot 1, however.

At the south end of the area, a number of structures to the east of wall 048 may have had an industrial function (illus 19 and 21). A stone-lined channel (Context 361), set below floor level, may have functioned as a flue for an oven or kiln. Adjoining this to the south and east was a solidly-built, mortared stone pad (Contexts 360 and 362), which probably represents the base for the oven/kiln itself. This structure was truncated to the north by wall foundation cut 358. To the east of this was an oval stone structure (390), with a cobbled base sunk below floor level, the east side of which was truncated by wall 398 (shown on illus 22). This may have been another oven or kiln, although there was little evidence of in situ burning. These structures are not obviously contained within a recognisable building, and may rather have been situated in an open yard, especially considering that the flue 361 is located in the line of the close between Plots 1 and 2. If this is the case, they may pre-date the production of Edgar's

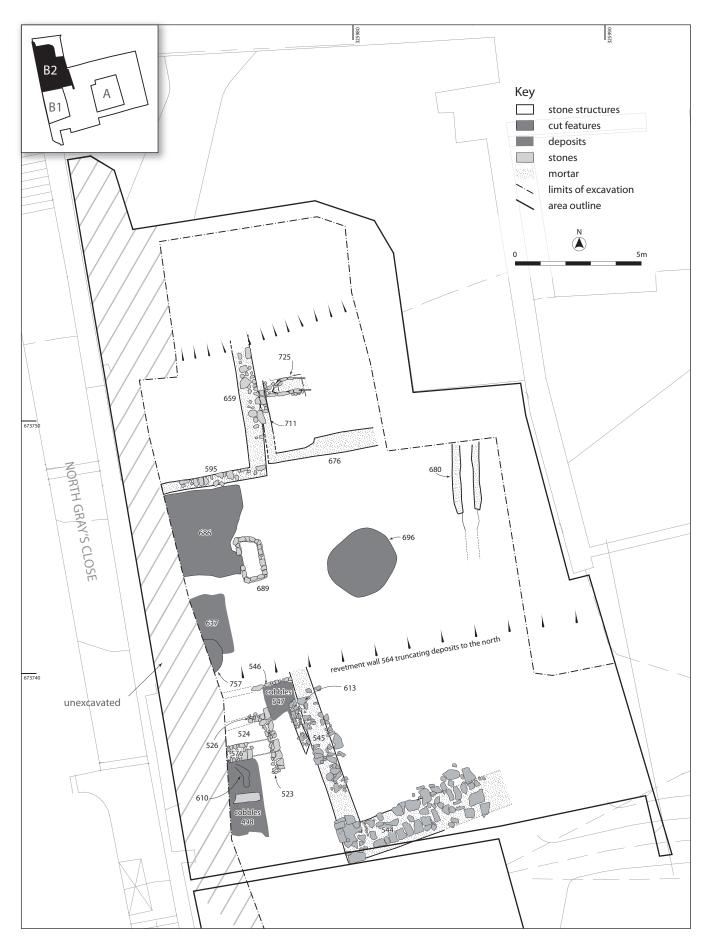
Further to the north (illus 22), a stone-walled building defined by clay-bonded rubble walls 544 and 545 also appears to be early, although little can be said about it since its interior was entirely removed by the insertion of a group of 19th-century tanning pits. The north end of this building was also truncated by a floor of the tannery set at a lower level, bounded by wall 564. This area did, however, include a stone-filled pit 696, containing 17thcentury pottery, which appears to have functioned as a soakaway. At the north end of Area B, walls 676 and 711 defined another building, abutting the brickfloored cellar on Plot 1. The interior of this building was also severely disturbed by later structures associated with the tannery, but part of a culvert (Context 725) was seen crossing the floor from east to west. Possibly it connected with another culvert (Context 680), dating to the 17th century, at the east edge of this area within the adjacent Plot 3.

#### 4.3.3 Phase 3: 19th century

The 19th- and 20th-century history of Area B is dominated by the expansion of the Hewitt's tannery, substantial remains of which were found during the excavation. A tannery which had existed on the site since at least the 1830s, under the ownership of one Girles, was bought by the Hewitt family in 1865 following a fire (G. and R. Barlee, pers comm). It is undoubtedly Girles' tannery that appears on the 1854 1st edition OS map (illus 4), which shows it occupying part of Plot 1 and containing small rectangular structures that may represent tanning tanks. Following the takeover, the Hewitts' business



Illus 19 Area B: Phase 2 (north end)



Illus 20 Area B: Phase 2 (south end)



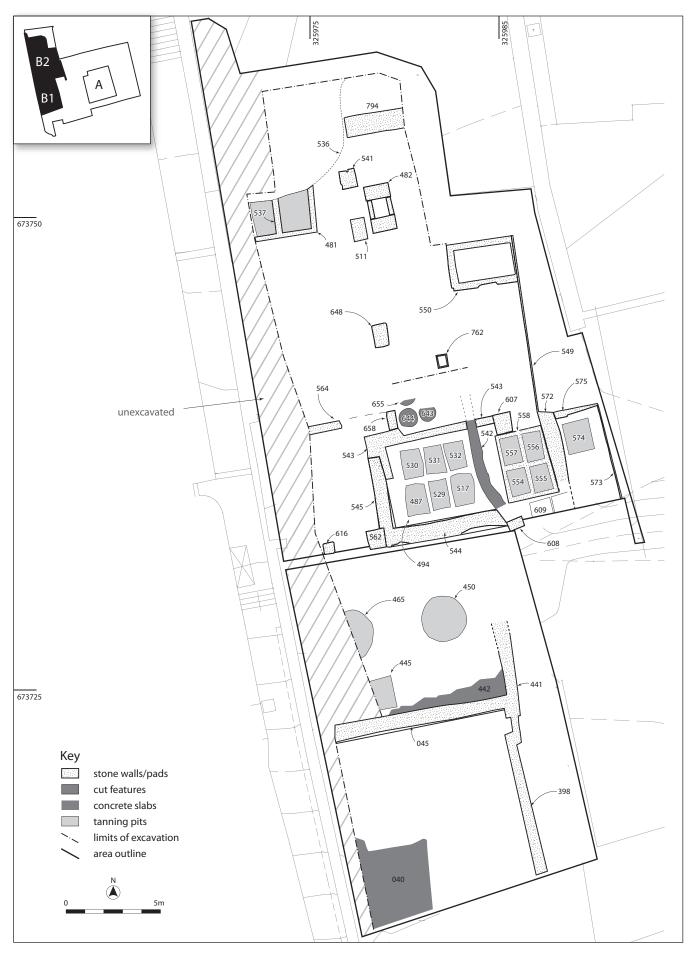
Illus 21 Area B1, showing wall 048 and associated cellar in foreground and industrial structures 361, 360 and 390 in background

expanded rapidly, and the tannery grew to cover virtually the whole of Area B.

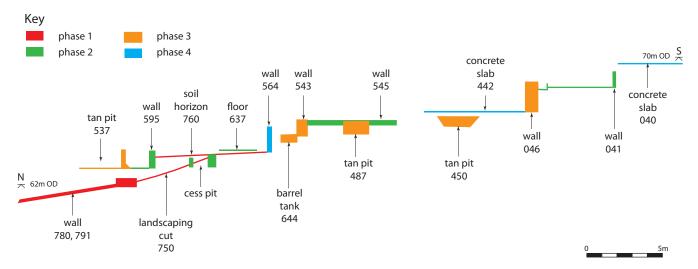
Whether any of the tannery-related features shown in illus 22 relate to the early 19th-century tannery owned by Girles is unclear. Two mortared stone tanks (Contexts 481 and 537), which were lined with clay and wood, are in the same area as the early tannery mapped in 1854, but there is no evidence to suggest that they are earlier than the other structures. These tanks overlay a building (walls 595 and 659 on illus 20) that appears to have been destroyed by fire, and it may in fact be this earlier building rather than the tanks that relates to the pre-1865 tannery.

The former owner, Mr George Barlee, remembers a very complex layout that resulted from the tannery having developed by incorporating a number of adjacent buildings. This is reflected in the excavated features, which occurred over several different levels and were frequently set within earlier structures. A row of massive stone pier bases (Contexts 541, 511, 648 and 658) presumably supported the arches of a vaulted ceiling in the north part of the site. In the same area

was a substantial stone and brick machine base (Context 482); and a brick-built platform with a low raised edge (Context 550), possibly a base for tanning tanks. At a higher level, presumably within a separate room, were several groups of tanning tanks, set into the interior of the earlier building defined by walls 544 and 545, which may have been still standing, and incorporated into the tannery, during this phase. The tanks were typically lined with wood bedded in a thick surround of clay to make them watertight, and contained wood chippings that evidently formed part of the tanning liquor. The area to the south of 544, bounded by walls 046 and 441 to the south and east, had a concrete floor which covered the remains of several other tanning tanks (445, 450 and 465). Two of these, 450 and 465, had wooden linings in the form of a massive barrel base, which are typical of bottle tanning, a technique which was known to have been carried out on the site (G. Barlee, pers comm). Tank 450 contained quantities of refuse of late 19th- or early 20th-century date, much of which was undoubtedly related to the business, including shoes and scrap leather.



Illus 22 Area B: Phases 3 and 4



Illus 23 Schematic profile of key features and ground levels in Area B

While the remains relating to the tanning industry in Area B were extensive, varied and often well preserved, all relate to the late 19th- and early 20th-century business operated by the Hewitts. Detailed

analysis of the layout of the building and interpretation of the recorded features would require much further research, and is outside the scope of this report.

## 5 THE FINDS

#### 5.1 Introduction

The finds assemblage covered the whole range of occupation in the area, from as early as the 12th or 13th century to the 20th century. However, it was the 17th- and 18th-century assemblages which stood out, in terms of quantity, quality and context. The medieval material, including pottery and a distinctive buckle, provided some useful dating evidence but did not add anything new to our knowledge of the material culture of medieval Edinburgh. The 17th- and 18th-century material on the other hand was related to the occupation and backfill of several stone-built cellars and rooms in Area A. Three cellar backfill deposits in particular were rich in finds. These provided a rare opportunity to look at large high-quality finds assemblages from well-dated contexts. Hence the decision was made to concentrate resources on this period. The deposits in Area B were less well stratified, and it was not possible to date deposits as precisely. However, many of the finds are of considerable interest in their own right, notably two sherds of maiolica tile which point to the presence of a very high-status building in the vicinity during the 16th

The finds report has been ordered by feature rather than by the more traditional way, by material. This allows the deposits from the various cellar backfills and floor deposits to be illustrated and discussed together, reviewing the overall evidence for their dating, deposition and social inferences.

Inductively coupled plasma analysis (ICP) was undertaken on 22 of the sherds of redware and tin-glazed pottery and tile by Nick Walsh (Royal Holloway College) and Michael Hughes. This process can help provenance ceramics based on identification and analysis of trace elements in the clay. Results are given in Appendix 1, with a full report available in archive, and are incorporated into the report text where relevant. Some results of this work were anachronistic to the typological evidence, and these are discussed.

#### 5.2 Plot 6 (area A, east side of Paisley Close)

5.2.1 Early 17th-century backfill deposits from the north cellar

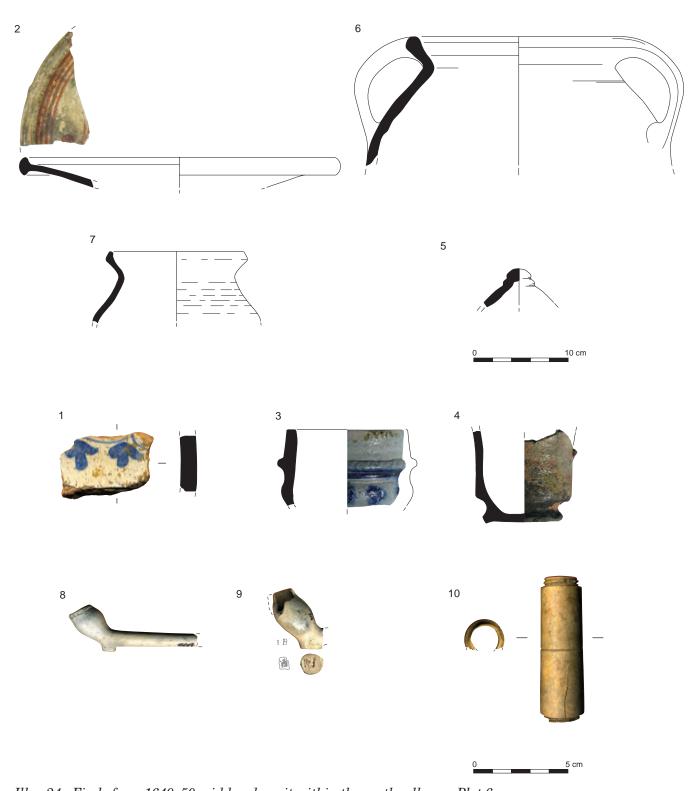
The finds from Contexts 209, 216, 220, 222, 234, 236, 237, 239, 241, 380, 381, 382 (illus 13, 14 and 24) included a variety of pottery remains, with some glass, clay pipe and metal work. Material from the floor deposits and the lowest deposits (Contexts 237,

239 and 241) included a Weser slipware dish (illus 24.2), unlikely to post-date *c*. 1620 (Hurst et al 1986: 250) though possibly of some age when deposited, and fewer clay pipe sherds than might be expected; these contexts could pre-date the overlying deposits by several decades, though the evidence is not conclusive and they may all have been dumped at the same time. Otherwise, the refuse deposits in the north cellar cannot have been dumped before *c*. 1640, the dating was based on ten clay pipe bowl forms, a sherd of Westerwald stoneware (illus 24.3) (Gaimster 1997: 252), and a tin-glazed dish sherd (illus 24.1).

Drinking vessels and dishes from the cellar were all imported. Drinking glasses are represented only by fragments of knopped stem and moulded bosses. Similar glass was produced in England, the Low Countries, Italy and other parts of Europe, but given its close trading links with Leith, the Netherlands is the most likely source. The stoneware tankard (illus 24.3) probably arrived in Edinburgh from the Rhineland, via the Low Countries. Dishes were represented by only two sherds, both colourful, both imported from different parts of Europe, the Weser dish (illus 24.2), from Germany, the tinglazed earthenware sherd (illus 24.1) probably from Spain or Portugal. Though the results of ICP analysis (see Appendix, ICP Sample 15) suggest the latter is a Low Countries product, the red fabric suggests a more southerly origin (G. Haggarty pers comm).

The majority of the jugs, cooking wares, jars, and other containers were all of local manufacture, probably all made in or around Edinburgh. Scottish red and greywares were made at a number of centres along the Forth, including Edinburgh at Potterrow (Chenery et al 2001: 46), though the only excavated kiln site is at Throsk, Stirlingshire (Caldwell & Dean 1992; Harrison 2002). The local pottery assemblage was made up predominantly of the usual 17th-century forms of jugs, handled jars and skillets. The handled jars (illus 24.6-7) may have had a number of different uses in the kitchen, but could also have been used as chamber pots. The skillets are generally in the form of deep pans with everted rims and folded handles. They are well used, with thick layers of soot on their exterior. There were also three examples of pirlie pig money boxes (illus 24.5). The influence of incoming Low Countries wares is still apparent in some of the forms, such as the small drug jar or ointment pot (illus 24.4).

There are three sherds from imported containers. One, a rim from a storage jar, is the earliest stratified piece of Anglo-Dutch tin-glazed earthen-



Illus 24  $\,$  Finds from 1640–50 midden deposit within the north cellar on Plot 6  $\,$ 

ware from the site. There was a sherd of Loire-type jug (Hurst et al 1986: 99) and a sherd of Seville olive jar (Hurst et al 1986: 66; Goggin 1960). Both are associated with the importation of olive oil, the latter possibly also with olives, honey or wine. The olive jars were large amphorae for bulk storage and transportation; their distribution in Scotland is largely coastal, and they are more common in Leith (eg Franklin forthcoming) than in Edinburgh.

The handful of sherds in Edinburgh are generally associated either with high status sites such as Queensberry House (Hall, unpublished pottery report summarised in Cox & Hall 2008), or with a market place (McMeekin forthcoming). There were two sherds from this site, both from this cellar. They imply either a household of considerable wealth, or the store of a merchant.

The clay pipes, like the more mundane pottery,

were largely of very local manufacture. Only one bowl (illus 24.8) was of a form more typical of the Low Countries. The others were all local, several marked 'B' and 'IB' for the Banks family of makers, (illus 24.9) who dominated the early industry in Edinburgh. Other finds include a bone tube (illus 24.10) which may have been part of a musical instrument such as a set of bagpipes. It is slightly narrower at one end than the other and has a screw thread at each end.

# 5.2.2 Late 17th-century deposits overlying the backfill of the north cellar

The finds from Contexts 182, 184, 193, 198, 201 and 203 (illus 13, 14 and 25) were sufficiently different from the c. 1640s cellar backfill assemblage just described to suggest that several decades elapsed between the two periods of deposition. This material is likely to have been deposited between 1670 and 1680, and similarities and sherd joins between the different contexts suggest deposition as a single event. Dating evidence comes from eight clay pipe bowls, marked for Edinburgh makers Patrick Crawford (illus 25.16, illus 25.17), William Banks (illus 25.15), Thomas Banks and William/Walter Young. The late 17th-century material seems to be associated with the construction, or early use, of a building constructed over the backfilled north cellar, which appears on the 1st edition OS map.

The assemblage includes some unusual finds. There are several pieces from a Low Countries whiteware handled jar (illus 25.13), glazed bright green on the outside, and yellow on the inside, with a distinctive thumb-stop on the handle. These were occasional finds in Norwich in 16th-and early 17th-century contexts (Jennings 1981: 134, fig. 55: 923–41), and thus it appears to have been of some age when deposited here. In Norwich the form was interpreted as a cauldron. There is no sign of heat damage on the exterior of the Jeffrey Street pot, but crazing of the glaze in the lower interior suggests it may have been used as a chamber pot.

A very large clay pipe bowl (illus 25.18) was found, unfortunately fragmentary and unmarked. The heel was present and part of the bowl and stem. If in proportion to the heel, the bowl would have been in the order of 55mm high. There is no trace of sooting and so this may have been a display piece for a pipemaker or tobacconist. The stem appears to have been broken off, but rather than being discarded, the stump was then hollowed out and the edges filed down. Probably it had another stem fitted to it to extend its life.

An unusual flat rim and several body fragments from a small bottle appear to be from a sand glass (illus 25.14). These are tear-shaped vessels and can be distinguished from similar-shaped phials by their lack of neck. These were made in pairs

and used to make hourglasses. One was filled with sand, and they were then lashed together with a pierced copper alloy disc in the middle to regulate the flow. The whole was then fitted into a wooden frame. A complete 17th-century example of such an hourglass from Linlithgow Palace is illustrated by Turnbull (2001: col. illus 7). They are occasional finds in 16th- and 17th-century deposits, though under-represented in the literature as they are easy to mistake for phials, especially when fragmentary (Willmott 2002: 91). They were a relatively inexpensive way of measuring the passage of time, used on ships, in churches etc. There are records of hourglasses being imported from the early 17th century (Turnbull 2001: 50) and evidence that they were made in Leith in the late 1670s or early 1680s (ibid: 24). The finding of one in a deposit of this date is therefore very interesting and it may well be a local product.

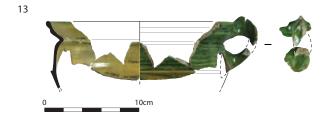
Another remarkable find was a piece of turned ivory (illus 25.19), with decorative beading, a socket at one end and a stem with a screw thread at the other. It is clearly part of a larger object, possibly a candlestick, the stem screwing into a wooden or metal stand, and candle inserted in the socket. It was unfortunately unstratified, but found during cleaning of the top of this cellar deposit, and probably derives from it.

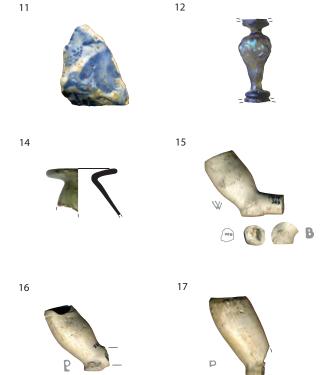
Significantly, there is also one large body sherd from a wine bottle. This is the earliest evidence for wine bottles from the site. Wine bottles have been made in Britain since about 1650. In Scotland there is only evidence for their production after 1687 (ibid: 286), but they are not commonly found in Scottish contexts until the mid 18th century. This bottle then was most likely imported from the Low Countries or England.

Another first is the earliest datable appearance of pan tiles, of which seven sherds were found in Context 182. Pan tiles are known from contexts in the second half of the 17th century in the area (Franklin forthcoming), but again they do not seem to be regularly used until the 18th century, and they never become common. To this day in Edinburgh, stone is the most common material used for roofing.

Other glass finds include a piece of vessel glass with optic blown bosses, a rim fragment from a glass dish (cf Willmott 2002: 96, fig. 128), two small glass beads (colourless transparent and pale blue opaque), probably from a decorative piece of dress fabric. The finest piece of glass was unfortunately unstratified, found during the cleaning of the top of the cellar deposits, but may well derive from it. It was a 'lion mask' stem from a goblet (illus 25.12), so-called because the decoratively mould-blown stem resembles a lion's face. These were produced from the mid 16th to the mid 17th centuries (Willmott 2002: 63–4). Another similar stem was found in Area B (illus 28.54).

Other finds include Anglo-Dutch tin-glazed earthenware dishes, bowls and a possible bottle.







Illus 25 Finds from 1670–80 deposits overlying the north cellar on Plot 6

One of these dishes (illus 25.11) was exceptionally well painted and would have been of some value when new, though all that remains of it is one small sherd with a painted bird. There are also sherds of Loire-type jug, Frechen stoneware and Seville olive jar.

#### 5.2.3 Deposits from the south cellar

Finds from Contexts 137, 138, 196, 253, 292 and 299 from the south cellar in Plot 6 (illus 5, 26) are more mixed in date. However, some interesting objects were found within it and may relate to its use or disuse. They included a sherd from a Werra slipware dish (Hurst et al 1986: 242) and sherds from an unusual stoneware jug decorated with moulded flowers (illus 26.21). Both are from Germany; the mottled glaze on the jug suggests a Frechen origin, but no parallels could be found for this pattern. There is also a sherd from an early Anglo-Dutch tinglazed dish (illus 26.20). It was made between about 1620 and 1640, possibly in Antwerp (G. Haggarty pers comm) and is thus one of the earliest pieces of Anglo-Dutch tin-glazed earthenware from the site. These types of dish are not common in Scotland. The results of ICP analysis (ICP Sample 14) confirm Antwerp as a likely source.

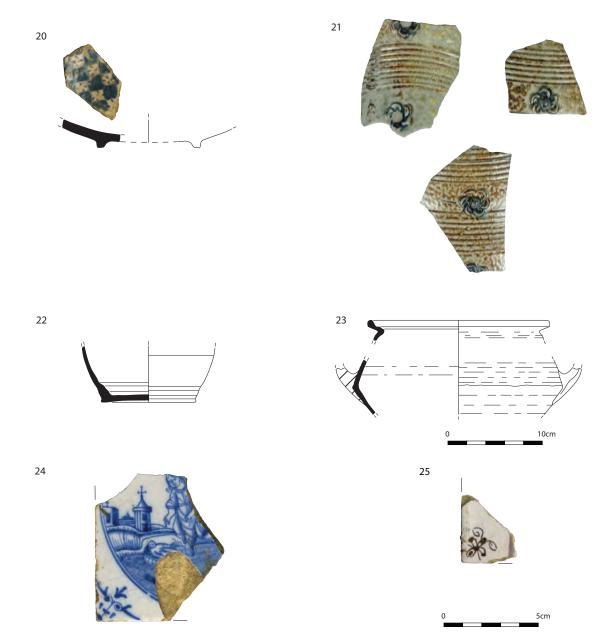
There were three pieces of Delft tile, all 8mm thick, indicating a date in the later 17th or 18th century (Pluis 1997: 71). The largest sherd depicts a scene of Moses in the bulrushes (illus 26.24). Biblical scenes were commonly found on tiles (eg ibid: 391). Smaller sherds are from another tile with a blue landscape scene and a corner sherd with a purple spider's head motif (illus 26.25).

Context 292, the backfill of culvert 223, contained clay pipe and pottery which pointed towards the earlier 17th century. They included a Low Countries redware cooking pot (illus 26.23) and a complete base from a French Loire-type jug (illus 26.22) (Hurst et al 1986: 99; Haggarty 2006a: file 32).

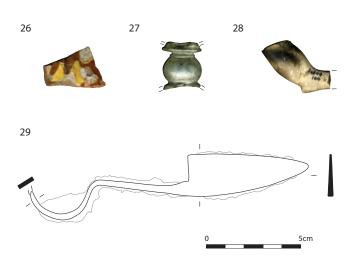
#### 5.3 Plot 5 (area A, west side of Paisley Close)

# 5.3.1 17th-century floor deposit and pits within the northern cellar

Finds from primary deposits relating to the use of the northern cellar on Plot 5 (illus 6, 27) are few and rather mixed in date and function, but are consistent with occupation in the late 16th and early 17th centuries. A small number of finds from pits sealed by the floor surface (Contexts 459, 464 and 470) are of generally 16th-century date. Finds from the floor deposit (Context 160) include two corroded coins, one of which is mid 17th century, the other possibly French, dating to the 18th century. There is an early 17th-century Dutch clay pipe bowl (illus 27.28), the knop from a stemmed glass vessel (illus 27.27), a small pair of shears (illus 27.29), an awl or similar pointed tool with decorative tinned stripes close to the tip, and a piece of lead shot (18mm diam, 33g). An unusual sherd of trailed slipware might be of Scottish manufacture. It was found sealed beneath the floor, suggesting a date no later than the first half of the 17th century (illus 27.26). ICP results (ICP Sample 3) suggest this was manufactured in Edinburgh. Similar sherds were found in Area B (illus 28.52).



Illus 26 Finds from the south cellar on Plot 6



Illus 27 Finds from floor deposits within the cellar to the north of Plot 5

# 5.3.2 Mid 18th-century backfill deposits within the northern cellar

The dating of the backfill deposits comprising Contexts 103, 104 and 159 comes largely from the artefacts lacking rather than those present. Glass wine bottles provide the best evidence and indicate a date around 1740. The pottery is less precisely datable, but largely in agreement. The presence but not dominance of Staffordshire-type products is very telling, as is the scarcity of clay pipes and coinage.

#### Glass wine bottles

The most outstanding part of the finds assemblage from this deposit is the large number of glass wine bottles (illus 29.32). They also provide the best dating evidence. A minimum of 19 bottles are represented, based on a count of the bases and rims. There were no seals and dating therefore was based on Dumbrell's typology of English bottles (Dumbrell 1983).

It seems likely that these bottles were all dumped at the same time, and that they date the backfilling of this cellar. They must all then be broadly contemporary, albeit the reuse of bottles means some may be a few years old when dumped. The bottles best fit into the 1730s, and the most likely date for their deposition is therefore around 1740, or possibly a few years later depending on for how long they might have been reused. They are of a slightly later form than the more rounded bottles seen in Hogarth's 'A Rake's Progress', painted between 1732 and 1734. Most are typical mallet bottles, though one or two more rounded forms could be termed transitional onion/mallet bottles, and one distinctly oval-shaped base is a 'bladder onion' bottle, a relatively unusual but long-lived 18th-century variant. In the 1730s there were a wide variety of bottle shapes around. There was much experimentation, eventually leading towards the more cylindrical forms of the 1740s. Base kick-ups are also at their most exaggerated, sometimes half the height of the body (Dumbrell 1983: 79-80) and some of this group's bases are steep-sided mounds, the deepest being 50mm. String rims have a typically pronounced angled profile, as much as 8mm below the rim, though can be almost level with it. The rim itself is slightly out-turned at the edge. The most complete of these bottles is represented by the whole body and about half the neck. Its complete capacity is estimated at c. 850ml, which equals 1.5 imperial pints or 1 Scots chopin (Turnbull 2001: 5). Since all the bottles appear to be of broadly equivalent size, it can be assumed they are all *chopin* bottles.

It is notable to find so large a number of bottles of this early date in Edinburgh. The glasshouses in North Leith, Glasgow and possibly Port Seton produced bottles in the 1730s and 1740s (ibid). However, excavated examples of glass wine bottles from sites in Edinburgh and Leith are mostly of cylindrical form, indicating that they do not become common finds from urban middens until the late 18th century. The finding of such a large and tightly dated group of this date therefore suggests that the cellar backfill was not derived from common or general urban midden, but instead possibly from a wine store for an inn, a wine merchant or person of some wealth. The large pieces of bottle also imply little or no redeposition and it is possible that they were in the cellar when it was backfilled. Almost all were found in the lower layer of infill (Context 159), rather than upper layers 103 and 104. It is unlikely any were full at the time of destruction as there were no complete examples (illus 29.32 has been reconstructed from two large sherds) and no finds of corks (though the lack of any other organic finds suggest the absence of corks may be due to conditions being unsuitable for their preservation). Possibly these were the broken bottles left behind when a wine store in the cellar was moved out. They could also have been deliberately broken, as happened at the more rowdy type of social occasion (as described in ibid: 45). In view of the dating of the deposit it is also worth noting that there was a particular patriotic association between the drinking of claret (as opposed to English port) and the Jacobite cause. The contents of the bottles could have been drunk and the containers smashed in the autumn of 1745, before the Battle of Prestonpans or the long march south into England.

#### Pottery

The pottery included some similarly large pieces of vessel. The composition of the assemblage was interesting in terms of both fabrics and functions, and as much for what it did not include as for what it did.

Arguably the most interesting finds, both in terms of dating and as a glimpse of things to come, are three sherds of white stoneware. There are two rims from mugs or tankards of English white dipped stoneware (sometimes called 'white slipped stoneware with iron-dipped rims'; cf Edwards & Hampson 2005: 18, col. pl. 8 & fig. 5; Green 1999: 137, fig. 110). These were made in Staffordshire and London from about 1700 onwards (Green 1999; Mountford 1971) with the peak period of production being c. 1710–60. It was relatively cheap and hardwearing and thus popular in public houses, but it is an uncommon find in Scotland and generally only after c. 1740 (G. Haggarty pers comm).

There was also one body sherd of true white salt-glazed stoneware. This was developed in Staffordshire slightly later, around 1720, and became extremely popular as hard-wearing but relatively inexpensive white tableware, until overtaken by creamware in the 1770s. It is commonly found in Scotland, but only after c. 1750 when local production began (Edwards & Hampson 2005; Cruikshank 1987: 10). That only one sherd of it was found in this deposit suggests a date before 1750. The sherd is from a cylindrical and unadorned vessel, with a diameter of about 90mm, probably a vessel such as a coffee or chocolate pot. Coffee is the more likely, being the cheaper of the two and hence more widely drunk (Edwards & Hampson 2005: 52).

These, along with three sherds from blue-painted tin-glazed dishes (eg. illus 29.30) were the only remains of anything that might be termed fine tablewares. None were represented by more than a sherd and all were from the upper fills (Context 103 or unstratified), suggesting they were introduced to the cellar as part of the backfill deposits.

Local red and greywares were still the predominant type of pottery in the 1740s. The tradition survived surprisingly late, into the 1770s (G. Haggarty pers comm) until industrial methods and changing consumer tastes put an end to it. Two sherds were sampled for ICP analysis (ICP Sample 6, illus 29.31; ICP Sample 7, illus 29.35) and both were

interpreted as being of Edinburgh manufacture, chemically similar to sherds from Chambers Street. Dishes of local redware appear in this deposit, for the first time. These are large and deep with flanged rims, suitable for serving food (illus 29.31). Skillets (illus 29.35), bowls and handled jars (illus 29.36) are also represented.

The vessel most conspicuous by its absence is the jug. Large olive-green glazed jugs are a ubiquitous staple of the Scottish post-medieval pottery industry. Here there are no jug rims at all and only a handful of body sherds (recognisable by their unglazed interior surface). Typically used for storing and serving liquids, it is possible that their function here has been taken over by glass bottles. The much smaller capacity of the bottles however suggests the one might not be directly replaced by the other. It is perhaps a matter more of the kinds of liquids that were being stored.

For storage of a different kind, there were two examples of small, straight-sided storage jars. Sometimes called apothecary or drug jars, they are particularly associated with apothecaries, though were also used for general domestic storage (Archer 1997: 377–80). One was of local manufacture, the other represented part of the base and wall of a large tin-glazed earthenware example (illus 29.33). It is painted blue, with a common design, if a rather slap-dash rendering. ICP results (ICP Sample 16) indicate a Low Countries origin and it probably dates to around the second half of the 17th century (G. Haggarty pers comm), and was hence some decades old when deposited.

The industrial methods developed in Staffordshire began to be introduced to the Scottish pottery industry around 1750 (Haggarty 2006b; Haggarty 2009) and rapidly changed the local pattern of ceramic consumption. A deposit of this nature from twenty or even ten years later would look very different, as black-glazed and slip-decorated redwares replaced the olive-glazed wares, and white salt-glazed stonewares replaced the tin-glazed earthenwares.

#### Other finds

Other dating evidence came from two coins, both of 17th-century date. One is in poor condition and could not be dated exactly, but is probably a Scottish Turner. The other is a Swedish quarter öre dated between 1635 and 1642. Swedish coins are regular finds in Scotland, particularly in the north. Trading ties between the two countries were strong, as were military ties. Many Scots went to Sweden in the early 17th century to serve in the Thirty Years War. It was in the late 1630s and early 1640s, with religious unrest and Civil War brewing at home, that many of them began to return to Scotland (Berg & Lagercrantz 1962).

In view of the dating of the bottles, some 30 years after the 1707 Act of Union, some British coinage might be expected. The old Scottish coins were not

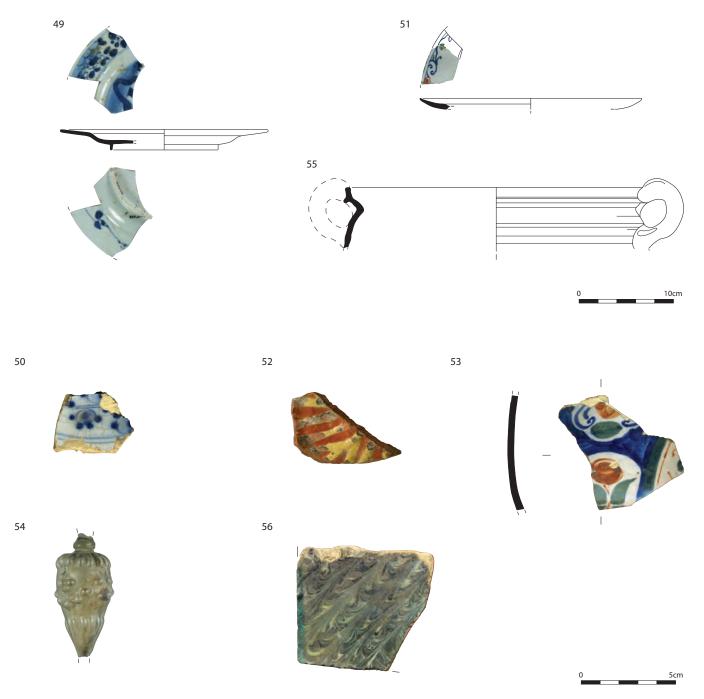
technically legal tender after the Act. However, in practice there was a critical shortage of small change in Scotland during the early 18th century. The desperation for coinage led to forgeries, the use of old Scottish coins, foreign coins and low-value bank notes. The first British coins to be found with any regularity in Scotland are halfpennies and farthings of George II struck between 1729 and 1754, but it seems the issues were too small to meet demand. There are continuing complaints into the later 18th century about the scarcity of coinage, backed up by their scarcity in the archaeological record (Holmes 1998: 74–78). In this light the finding of only two coins, one foreign, both out of date, seems entirely to be expected in a 1740s deposit.

Clay pipes also provide some dating evidence. The smoking of clay pipes was a little out of fashion by c. 1740, and only a handful of stems were found in the backfill. One of these includes a heel with a maker's mark. The heel was stamped with the Edinburgh castle mark and the moulded initials were 'DB'. The only maker recorded in Edinburgh with these initials is David Banks (Gallagher 1987: 29), recorded in 1705–6. Part of a pipe bowl bearing these initials was found in an excavation in Leith, the bowl form dating to c. 1660–1710 (Franklin forthcoming: no. 63). The pipe stems may therefore have been some decades old when the cellar was backfilled.

Other finds of a domestic nature included a small bottle of pale blue glass (illus 29.34), possibly for perfume or medicine, a small round glass bead of a deep blue colour, a decorative object made of sheet copper alloy, possibly a hand mirror with ornate openwork handle (illus 29.38) and an ivory knife handle (illus 29.37). These all point to a certain degree of affluence in the vicinity. The knife handle is marked with deep and apparently deliberate score lines on both sides. On the left side (as it would have been held) the lines appear to make up a stylised 'W'. On the right side there are six diagonal dashes, one long, and five short. They may mark ownership. There is also an early decorative ceramic marble (illus 29.39), made from marbled red and yellow clay. Ceramic marbles were produced from at least the 17th century, but they are rare finds on archaeological sites before the 19th century (Baumann 2004: 22).

In with all of this domestic waste is one overtly military find in the shape of a piece of cast iron shot (illus 29.40). At 62mm diameter (approx 2.5 inches) and 948g (2 lb) in weight, this was a standard-sized ball. By the early 18th century the technology to make cast-iron shot was available in Scotland. Two-pounders were relatively small guns, commonly used for defence. In view of the dating of this deposit, it is intriguing to speculate that it might be related to the events of 1745 when Jacobite forces took the city of Edinburgh.

There are several large sherds of window glass, including a complete lozenge-shaped pane measuring  $131 \times 88$ mm, with a 79mm side and acute angle of  $68^{\circ}$  (illus 29.41). A 4mm wide came shadow is clearly

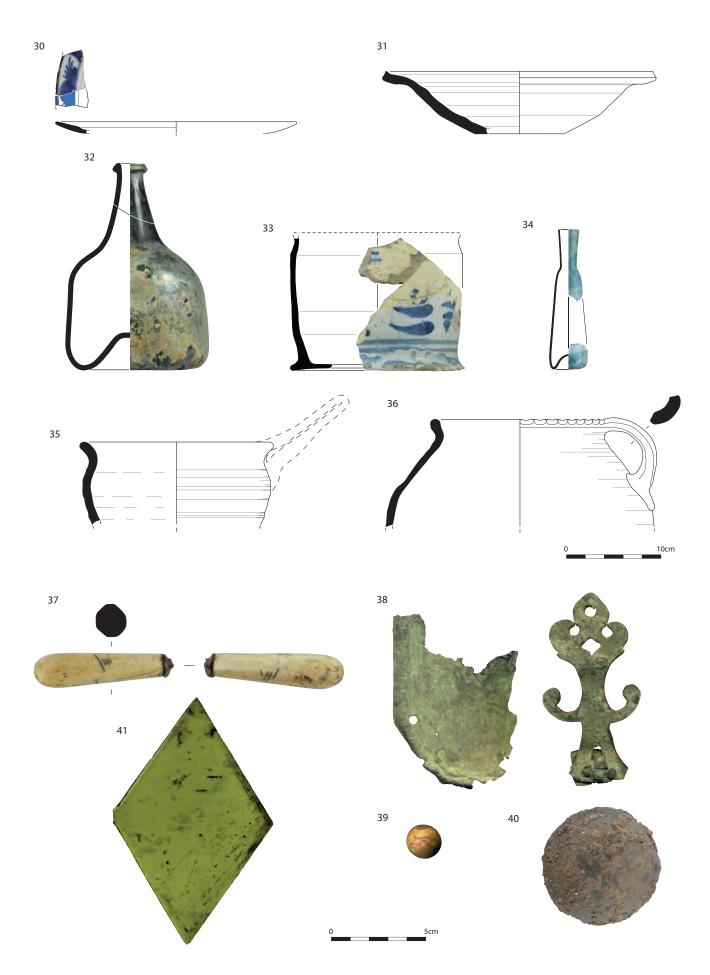


Illus 28 Finds from the backfill of the cellar to north of Plot 5

visible around three of the sides. By the late 17th century new houses in Edinburgh were typically built with glazed windows. The typical form was lozenge-shaped panes held by lead cames and fitted into an iron frame. In poorer residences, the use of oiled paper was recorded as late as 1732 (Turnbull 2001: 52–3).

# 5.3.3 17th-/18th-century floor deposits within the southern building

Finds shown in illus 30, from the three rooms to the south of the cellar, between Paisley Close and Bailie Fyfe's Close (illus 9), include floor deposits (Contexts 119, 125 and 174), and pits sealed by the floor deposits (Contexts 156, 157, 225, 250, 263, 271, 279, 285, 289, 291, 296, 297 and 330). These range in date from early 17th century (Weser slipware jug, illus 30.42, clay pipes), through late 17th century (clay pipes, coins) to mid 18th century (white salt-glazed stoneware, hair curler, illus 30.44). As there is no evidence of occupation after the mid 18th century, the building may have gone out of use around the same time the cellar to the north was backfilled. There are few specific clues to the function of the three rooms, although some of the finds imply a certain middle-class domestic affluence.



Illus 29 Finds from floor deposits in the three rooms to south of the cellar on Plot 5

A ceramic hair-curler found in the south room (illus 30.44) can be typologically dated to the mid 18th century (Le Cheminant 1982). It is stamped on both ends with a maker's mark 'WB'. This is the most common found on ceramic hair-curlers in Britain. They were made in London and have a widespread and long-lived distribution. The mark seems to appear around 1730, and is in use until at least 1780. This is the earlier variant of the mark, with the dots above and below the initials, rather than a crown. 'WB' curlers have been found as far afield as colonial America (Hume 1976: 322) and have been found before in Scotland (eg Cox 2002: 114). There is a connection between makers of hair-curlers and clay pipes, however, the small number of marks found on curlers suggests only a handful of pipe-makers branched out into this area. The London source for this example is not too surprising considering that there were probably no Scottish sources. There were few clay pipe-makers in Scotland in the mid 18th century and none in Edinburgh (Gallagher 1987).

Two large matching upholstery studs (illus 30.45) were recovered from the middle room. These were widely used for decorative as well as functional purposes, in furniture as well as coffins, from the 17th century onwards. They are common finds on archaeological sites of the post-medieval period (Egan 2005: 39) and their form has changed little to the present day.

A key found in the north room (illus 30.46), though of iron, is small with an asymmetric bit and therefore would only have worked from one side of the lock. It was thus for a casket, cupboard or drawer.

Coins found in the north room date from the mid and late 17th centuries. Due to the lack of coinage in Scotland in the early years of the 18th century, they may still have had a value as unofficial currency as late as the 1730s–40s. Perhaps by the time this

room was abandoned, British coinage was common enough in town that these were obsolete and hence left behind.

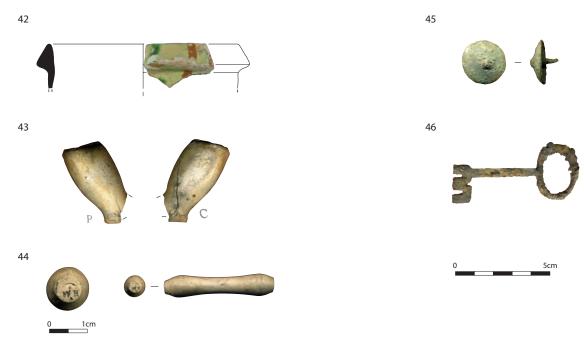
AWeserjug, also from the north room, is an unusual find (illus 30.42). Colourful slipware vessels in this tradition were made in Germany between about 1590 and 1620. They are regularly found in 17th-century deposits in Edinburgh and Leith but usually in the form of dishes. No other examples could be found of Weser jugs in Scotland, and this sherd may be the first. As a colourful and unusual piece it might have been in use for some time, an heirloom even. It does appear to be somewhat earlier than the majority of the finds in the room. Another odd find is an early 18th-century clay pipe by the Edinburgh maker Patrick Crawford (illus 30.43), with what appears to be a large firing crack running down one side. It was perhaps sold as a factory second because despite the damage it has been well used. Other finds include a brass curtain ring (diam. 30mm, hexagonal section) and sherds from a large cast-iron pot. There were also a number of small lumps of lead from both the north and middle rooms. These were of uncertain function, though one might have acted as a seal or bung.

#### 5.4 Plot 1 (area B, east side of North Gray's Close)

#### 5.4.1 Maiolica tiles

#### The tiles

Two maiolica floor tiles were recovered from a large pit (Context 686, illus 20, 30) towards the north end of Area B, in which they appear to be residual finds, a little abraded from redeposition. The other material associated with them is of mixed date but could not have been deposited before the mid



Illus 30 Maiolica tiles from pit 686 on Plot 1

18th century. The first (illus 31.47) is an elongated or 'oblong' hexagonal, glazed white with a flower in blue, green yellow and orange, surrounded by curling tendrils in blue and pale blue. It is mortared on the edge, indicating it has been used. It is 22mm thick. Its width is estimated at 89mm on the basis that the flower is placed centrally along the long axis. The second (illus 31.48) is part of a square tile, with a blue ground and part of a yellow border. The border appears to be oval-shaped. It may have framed a portrait or other design, though a circular border and patterned ground would be more usual (cf Dumortier 1999: col. pl. 1). It may be part of a larger tile panel design. It is not mortared, though is almost certainly from the same floor. It is 24mm thick.

#### Typological evidence

The tiles add to only three other examples known to have been found in Scotland. The first was a fragment from the Scottish Parliament site (Cox & Hall 2008: fig. 3.27b) which appears to be of the same type and of equivalent thickness, decorated in the same palette and similar style to illus 31.47. The other two were found in the courtyard of Holyrood Palace, immediately outside the palace walls (unpublished excavation by Kirkdale Archaeology). These may be of a different type. Only one retains any glaze but the design is all in blue, and is freer in style. While these other three tiles may all ultimately derive from Holyrood Palace, the Jeffrey Street tiles clearly derive from a different building.

Typologically, the Jeffrey Street tiles are of the 'Herkenrode type'. One (illus 31.47) has a near exact parallel at Herkenrode Abbey, Belgium (Dumortier 1999: col. pl.1, the central hexagonal tile in this illustration). Historical records show the Herkenrode tiles were ordered from a burgher in Antwerp in 1532 to be laid in 1533. In England, tiles of this type are found at a number of very high-status sites, all dating to c. 1520–40 (Gaimster & Nenk 1997: 183; Biddle et al 1959), including the royal sites of the Tower of London (Gaimster & Hughes 1999) and Whitehall Palace (Hurst & Le Patourrel 1999). The London hexagonal tiles are 84–100mm wide × 200– 220mm long, the square tiles 113-120mm wide, and all are 18-20mm thick. The Jeffrey Street tiles are slightly thicker but otherwise fall within this range. On typological evidence it seems almost certain that the Jeffrey Street tiles were made in the 1530s and came from the same Antwerp source as those from Herkenrode and Whitehall.

#### ICP evidence

The two tiles form a chemical pair and clearly derive from the same source. Analysis of results shows they were probably made in Antwerp, though interestingly, not at the same pothouse as the Whitehall and Herkenrode tiles (for a fuller discussion of the ICP evidence see Appendix).

#### Conclusions

All the evidence points to the conclusion that these tiles were produced in Antwerp in the 1530s. They must have been laid somewhere in the vicinity of the place they were found as part of a conspicuously expensive floor. The identity of the person who may have commissioned the tiles is discussed above (see 3.3 Occupants of the Excavated Areas in the 16th Century above).

# Late 17th-century finds from bedding layer for cobbled surface 498

The most notable find from this deposit was an extremely unusual Delft wall tile (illus 28.56). It was decorated with red and white slip which has been feathered and then glazed in a clear lead glaze with a greenish hue. The finished effect is of pale green and dark purple. The tile is 9mm thick, which is indicative of a mid to late 17th-century date. ICP analysis suggests a Low Countries origin, possibly Antwerp. The use of marbled slip is known on Delft tiles (Pluis 1997: 579; Ray 1973: 235) and feathered slip can be seen on Staffordshire slipwares from the late 17th century (Barker & Crompton 2007: 152). However, the combination of feathered slip and tiles is rare enough that no published analogies could be found. Two examples have been seen locally, though both unstratified, one from Leith and another from Aberlady, East Lothian (G. Haggarty pers comm).

Other finds from the context include other building remains such as iron nails, window glass and pan tile. There are also some sherds of local pottery. All the finds are consistent with a date in the second half of the 17th century.

#### 5.5 Plot 2 (area B, west side of Morrison's Close)

#### 5.5.1 Late 17th-/early 18th-century cellar backfill

The finds from within a cellar defined by walls 676 and 711 (illus 28.51-2) are few compared to the backfill deposits found in Area A but nevertheless are worthy of note. The clay pipes and pottery all point towards a late 17th- or early 18th-century date for the formation of this deposit. They include two pieces of slipware: a Staffordshire-type cup rim with feathered slip and a dish sherd with white sliptrailed decoration (illus 28.52). The latter two, along with the previously mentioned dish sherd from Area A (illus 27.26), are quite possibly Scottish products. They match the chemical profile of slipware sherds from the Scottish Parliament Site. This was a distinctive group of slip-trailed wares of unknown provenance which did not match examples tested from Berwick-upon-Tweed or London (Haggarty et al 2011). The finding of these slipwares at two sites in Edinburgh suggests a local origin is likely. The contexts of both sherds suggest a date in the 17th century and certainly no later than the early 18th century.



Illus 31 Finds from Area B on Plots 1 and 2

There is also a decorative tin-glazed dish rim (illus 28.51), probably dating to the first half of the 18th century (G. Haggarty pers comm), and an unusual black pan tile sherd. Black tiles may have been used in conjunction with red to make a patterned roof. A handful of other black sherds were found in another nearby context [662].

There were a number of other finds from Plots 1 and 2 in Area B. Though poorly stratified, they include some high-quality objects. A selection of the most interesting have been illustrated: vessel glass (illus 28.54), Chinese porcelain (illus 28.49), Low Countries redware (illus 28.55) and tin-glazed

earthenware (illus 28.50, 28.53). A full catalogue is available in archive.

#### 5.6 Discussion

While the finds include many remarkable items, most significant are the cellar backfill deposits from Area A, which provide three windows into the material culture of Edinburgh from the beginning of the Covenanters' uprising to the eve of the Industrial Revolution. The assemblages are not large, and biases of preservation should be borne in mind:

Table 1 Comparison of vessel use from three dated cellar backfills

	Material/Fabric	North Cellar, East of Paisley Close c 1630/1640		North Cellar, East of Paisley Close $c\ 1670/1680$		North Cellar, West of Paisley Close $c\ 1740/1750$	
Form		mvc	%	mvc	%	mvc	%
Dishes	?Iberian Tin-Glazed Earthenware	1	2%	-	-	-	-
Dishes	Anglo-Dutch Tin- Glazed Earthenware	_	-	3	6%	3	7%
Dishes	German Weser Slipware	1	2%	-	-	-	-
Dishes	Glass	_	_	1	2%	_	_
Dishes (or flanged rimmed bowls)	Scottish Post-Med Redware	-	-	-	-	3	7%
Total Dishes		2	4%	4	9%	6	14%
Bowls (fluted)	Anglo-Dutch Tin- Glazed Earthenware	-	_	1	2%	_	-
Bowls (painted)	Anglo-Dutch Tin- Glazed Earthenware	_	_	1	2%	_	_
Bowls (rounded)	Scottish Post-Med Redware	-	-	3	6%	1	2%
Total Bowls		-	-	5	11%	1	2%
Drinking Glasses	Glass	2	4%	2	4%	1	2%
Mugs/Tankards	German Westerwald Stoneware	1	2%	-	_	-	_
Mugs/Tankards	English White Dipped Stoneware	-	-	_	-	2	5%
Tankard/Coffee Pot?	English White Salt- Glazed Stoneware	-	-	-	-	1	2%
Total Drinking Vessels		3	6%	2	4%	4	10%
Jugs	Scottish Post-Med Greyware	12	24%	8	17%	1	2%
Amphora (olive jar)	Spanish Seville Coarseware	1	2%	1	2%	-	-
Jugs/Bottles	French Loire Type	1	2%	1	2%	_	_
Jugs	German Frechen Stoneware	-	-	1	2%	-	-
Bottle	Anglo-Dutch Tin- Glazed Earthenware	-	_	1	2%	-	_

organic materials such as wood, leather and basketry have not survived, vessel glass tends to shatter into small sherds that are difficult to spot during excavation, and both waste glass (or cullet) and scrap metal were in demand for recycling. Nevertheless, it is possible to compare these three assemblages statistically and recognise some of the changes taking place (table 1).

Over the period represented here, the uses to which ceramics were put increased, probably at the

expense of wood and other organics. At the same time, the products of local industries were being replaced by foreign imports. One trend which is apparent is the increase in availability of Anglo-Dutch tinglazed earthenwares during the middle years of the 17th century, rising from one vessel in 1640–50 to seven in 1670–80 (see table 1). These vessels were popular, due to their hygienically white glaze and bright decorative designs. They were, however, ultimately displaced by the more hard-wearing white

Table 1 (cont.) Comparison of vessel use from three dated cellar backfills

	Material/Fabric	North Cellar, East of Paisley Close $c\ 1630/1640$		North Cellar, East of Paisley Close $c\ 1670/1680$		North Cellar, West of Paisley Close $c\ 1740/1750$	
Form		mvc	%	mvc	%	mvc	%
Wine Bottle	Glass	_	_	1	2%	19	45%
Total Large Jugs/Bottles		14	29%	13	28%	20	48%
Drug Jars	Anglo-Dutch Tin- Glazed Earthenware	1	2%	1	2%	2	5%
Drug Jar	Scottish Post-Med Redware	2	4%	1	2%	1	2%
Pirlie Pigs	Scottish Post-Med Red/Greyware	3	6%	_	_	_	_
Sand Glass	Glass	_	_	1	2%	_	_
Perfume bottle	Glass	_	_	_	_	1	2%
Total Specialist Small Containers		6	12%	3	6%	4	10%
Skillets (poss includes some pipkins?)	Scottish Post-Med Redware	10	20%	7	15%	3	7%
Pipkins	Scottish Post-Med Greyware	1	2%	-	-	-	-
Total Cooking Wares		11	22%	7	15%	3	7%
Jars (everted rim & handles)	Scottish Post-Med Red/Greyware	13	27%	11	23%	4	10%
Jars (everted rim & handles)	Low Countries Whiteware	_	-	1	2%	-	_
Jars (everted rim & handles)	Unidentified Yellow- Glazed Whiteware	-	_	1	2%	_	_
Total Everted Rim Jars		13	27%	13	28%	4	10%
Total		49	100%	47	100%	42	
100%							
Window Glass (weight)		6g		14g		75g	
Clay Pipe (number of bowls)		14		9		1	

stonewares and creamwares in the second half of the 18th century. In the 18th century the industrial processes developed in England to produce these new wares go on to completely displace not only the tin-glaze industry but also many other older industries, including, in the late 18th century, the local Scottish tradition of red and grey earthenwares. The very beginnings of this can be seen in the 1740–50 deposit, containing one sherd of a white salt-glazed stoneware coffee pot, and two white

dipped stoneware tankards, and corresponding with a dip in tin-glazed and other table wares.

The most striking trend visible is the rise in the use of glass, from two vessels in 1640–50 to twenty-one in 1740–50, with an equivalent rise in finds of window glass (see table 1). In the earliest deposit, the vessels are both drinking glasses. At this date, glass was an expensive luxury which, unlike silver, was easily broken and was near worthless as scrap, and it therefore represented conspicuous consump-

tion (Willmott 2002: 31–2). Ownership of drinking glasses, which were probably imported from the Low Countries, was limited to the upper echelons of society (Turnbull 2001: 44–6). By 1740–50 the glass industry in Scotland was already sizeable, and in the form of wine bottles, glass had been transformed from a feature of luxury dining to a medium of storage. The equivalent rise in the use of window glass also corresponds to historical accounts of the High Street in the 17th century (Turnbull 2001: 52).

Wider trends in the use of liquid containers can also be observed during this period. The ceramic jug had been a staple of the Scottish pottery industry since the 12th century, but numbers declined at the same time as the use of glass wine bottles increased. Only one jug is represented in the 1740-50 assemblage. However, this is unlikely to reflect simple replacement: the bottles, containing one Scots *chopin* or 0.85 litres, are the same size as the smallest ceramic jugs produced at the contemporary kiln at Throsk, Stirlingshire (Caldwell & Dean 1992: 19), while typically jugs held 2-2.5 litres or more. Smaller ceramic jugs and bottles were already more common in the late 17th century, possibly linked to the increasing consumption of wine. A variety of examples are present in the 1670–80 deposit from Jeffrey Street, imported from the Low Countries, Germany, France and Spain. It is perhaps these smaller vessels rather than the larger locally made jugs that were replaced by glass bottles.

The rise and fall of the use of the clay tobacco pipes can also be traced through these deposits. Pipe-smoking peaked in popularity in the mid 17th century, but declined towards the end of the late 17th century onwards as taking snuff became more fashionable. There are few references to pipe-makers in Edinburgh during the 18th century (Gallagher 1987).

In the 1740s, the material culture of Scotland was on the cusp of major changes. The first industrial pottery in Scotland was set up near Edinburgh at West Pans in 1750 (Haggarty 2006b), and its products quickly took hold in the local market and beyond, following and shaping fashions in teadrinking and dining. The glass industry also took off: tax records from 1745 show that 277 dozen chopin bottles left Leith in 1745, compared to 16165 dozen in 1795 (Turnbull 2001, 289). A similar cellar deposit from twenty or even ten years later would look very different. The machines and moulds invented during the 18th century removed much of the craftsmanship and expense from manufacturing, bringing goods to the masses and making material culture more disposable.

## 6 FAUNAL REMAINS

#### 6.1 Introduction

An initial assessment (Tourunen 2008) was based on hand-collected material from all contexts and processing of a limited number of bulk soil samples. Further analysis has focused on contexts likely to represent undisturbed refuse deposits dating to the 18th century or earlier, and additional soil samples were sieved from relevant contexts to provide more material. The summary which follows is taken from a fuller report which has been deposited with the site archive.

# 6.2 Species representation and anatomical distribution

Most of the identified mammal specimens derive from domestic animals (table 2). The assemblage is dominated by sheep or goat followed by cattle and pig. Dog, cat, rabbit, rat, mouse and shrew were also represented.

Most of the fish bones derive from the cod family. Identified species were haddock (*Melanogrammus aeglefinus*) and cod (*Gadus morhua*). The herring family was represented by probable herring (*Clupea harengus*) bones. In addition, a small number of turbot (*Psetta maxima*) or brill (*Scophthalmus rhombus*), flatfish and salmon family were found.

A total of 43 bird bones were recovered from the sample, most of which belonged to the domestic chicken. The bones identified as goose (*Anser* sp.) and duck (Anatidae) might belong to wild or domestic birds.

Bones of domestic animals include elements from all major anatomical areas, though principally from meat-bearing parts. It seems likely that the material is domestic waste from a community which did not rely completely on buying ready-cut meat but slaughtered at least part of the consumed animals themselves. The material includes more slaughter waste from medium-sized mammals than from cattle. This could indicate that a higher proportion of the cattle meat was bought as ready-cut pieces.

The absence of horse bones and horn cores in the assemblage is interesting. As horse meat was not consumed, the presence of horse bones in urban medieval or post-medieval material is usually a sign of an industrial element to a site, connected with bone working, tanning or horn working (Tourunen 2007; 2008). In the Jeffrey Street assemblage detached horn cores were absent. Moreover, the sheep skulls exhibited evidence of horn core removal; they were probably transported to other locations. One sawn

Table 2 Faunal remains: species representation (minimum number of individuals) by phase

Species	Phase 1	Phase 2	Total
Cattle	5	70	75
Sheep	2	64	66
Goat		1	1
Sheep/goat	2	128	130
Pig	1	17	18
Dog		7	7
Cat	4	15	19
Dog/fox		1	1
Rabbit		2	2
Rat		13	13
Mouse	1	1	2
Vole/mouse		1	1
Shrew	3		3
Large mammal	2	105	107
Medium mammal	1	72	73
Small mammal	6	12	18
Chicken		19	19
Goose		3	3
Duck		1	1
Bird	2	18	20
Haddock		18	18
Cod		5	5
Cod family	26	101	127
Herring		2	2
Herring family	10	47	57
Turbot/brill		1	1
Flatfish	3		3
Salmon family		2	2
Unidentified	533	1595	2128
Total	601	2321	2922

antler fragment from Context 182 (Phase 2) is the only evidence of bone working on the site.

Species representation for the 17th–18th-century contexts at Jeffrey Street has been compared with assemblages from other Scottish post-medieval sites: Giles Street, Leith (Tourunen 2008), the new Scottish

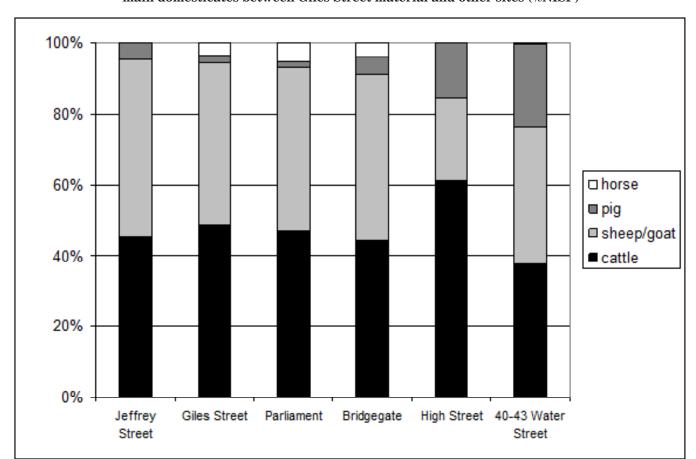


Table 3 Comparison of the abundance of the main domesticates between Giles Street material and other sites (%NISP)

Parliament site, Canongate (Smith 2007), Water Street, Leith (Henderson 2001), Bridgegate, Peebles (Smith & Henderson 2002) and High Street, Perth (Smith 1997). When taphonomic factors are taken into account, the assemblages can be shown to be broadly comparable.

The only wild mammal utilised for meat in the assemblage was rabbit. The low number of wild mammal bones recovered is common in Scottish medieval and post-medieval urban sites (eg Henderson 2001; Smith 1997: 768, 772). The bird bone distribution in the material is similar to that of Giles Street, the new Scottish Parliament site and Cowgate (Tourunen 2008; Smith 2006; Smith 2007). Domestic chicken, goose and duck bones were present, possibly belonging to domestic birds. The fish species present are commonly found in medieval and post-medieval Scottish urban sites (Cerón-Carrasco 2000; Tourunen 2007). The cod family fish were mainly represented by small individuals, which were brought to the site with their heads still attached, and are likely to represent local fishing (cf Henderson 2001).

The sheep (and goat) age data from mandibles indicates that both young and mature animals were utilised in Jeffrey Street. Animals under two years old were killed predominantly for their meat. The older sheep represent animals culled after being used for wool and possibly milk production. A similar age distribution was identified in the Giles Street post-

medieval assemblage in Leith (Tourunen 2008). All the sheep pelvises available for sex analysis derive from males, which could indicate that the animals brought to town were carefully selected for their meat; however, larger samples are needed to confirm this pattern.

#### 6.3 Medieval contexts

Faunal remains from medieval pits in Areas A and B appear to derive from domestic waste. Cattle, sheep and pig bones were present in Pit 189. A group of intercutting pits at the south end of Area B included cattle, sheep and fish bones (herring family, cod family and flatfish). Pit 419 included mouse and shrew bones, as well as a bone belonging to a small song bird. This indicates that the environment was attractive for small animals, which were possibly searching for food among domestic waste.

#### 6.4 Post-medieval contexts

The largest sample of animal bones was recovered from 17th-century deposits within the north cellar on Plot 6, to the east of Paisley Close. The material consisted of cattle, sheep, pig, dog, cat, mouse, rat, chicken, goose and fish (cod, haddock, herring and

salmon family) bones. Cat hind limb bones derived from Context 184 and probably belong to one juvenile individual, and cat front limb bones derived from Context 193 represent an adult individual. Context 237 included two epiphysis-metaphysis pairs (sheep or goat thoracic vertebra and sheep humerus) and Context 198 one (sheep or goat) ulna. Thus, these bones were likely to have been deposited in the layers before the soft tissue connecting them had decomposed. This indicates primary deposition of midden or waste in this cellar. The sample includes a large amount of waste from butchering and food preparation, relating to domestic activities such as cooking and consumption. However, some bones seem to relate to the early stages of slaughter and primary butchery, such as the sheep and cattle skulls and mandibles. The sample includes sheep skulls from which horn cores have been removed, as well as only oral (front) part of cattle skulls. It seems possible that the horn cores or nuchal (back) part of the skull were removed during slaughter and transported to another location for horn-working.

Floor deposits and pits within the cellar on Plot 5, between Paisley Close and Bailie Fyfe's Close (Contexts 160, 459 and 464) included cattle, sheep, pig, chicken and duck bones and could represent domestic waste. The backfill of this cellar (Contexts 103, 104 and 159), dated to the 1730–50s, is similar, with the addition of one rabbit and one goat bone as well as fish bones (haddock, cod, herring family and turbot/brill) and small animal bones recovered from the soil samples. Floor deposits within the three rooms to the south of the cellar on Plot 5 (Contexts 125, 174, 271, 279, 289 and 296), dating to the 17th–early 18th century, included cattle, sheep, pig and rabbit bones.

## 7 ENVIRONMENTAL SAMPLES

Forty-two bulk soil samples, a representative sample of those taken from the site, were processed for environmental analysis as part of the post-excavation assessment (Haston, 'Environmental Assessment' in Masser & Kimber 2008). These samples came from a representative range of deposits including floors, refuse deposits, hearths and pit fills. The results of this analysis were not encouraging: the quantity of carbonised plant remains was low from all contexts, generally limited to small quan-

tities of poorly preserved grains of oat, barley and club/bread wheat, which suggests that grain was not being processed anywhere on or near the site. Exotic plant remains were represented by only two charred grape pips. Wood charcoal was recovered from a number of samples, but in mostly very small sizes and quantities. The potential of environmental analysis therefore appeared to be limited, and no further work was carried out.

## 8 DISCUSSION

The Jeffrey Street site demonstrates the process by which the medieval framework of burgage plots was filled in during the 16th–18th centuries. Late medieval Edinburgh, like other Scottish towns, was small, described as having some 400 houses in the 1380s (Ewan 1990: 5). Most of these would have been situated on the forelands, while the backlands were probably not built up to any great extent, but often cultivated or used for keeping animals. Backlands were also used for dumping refuse, and deep soil deposits containing midden material are commonly found in excavations in the backlands, particularly on the lower slopes near the Cowgate, where deposits several metres deep have been identified (Jones forthcoming; Dalland forthcoming). Refuse was also buried in pits which may have been dug for building or flooring material. Evidence for medieval activity at Jeffrey Street was limited, due to the effects of post-medieval terracing and excavation of cellars. However, the presence of stone walls defining a terrace and a burgage plot boundary at the north end of Area B indicates a significant level of investment in the backlands, perhaps during the 13th century. Later in the medieval period, these walls went out of use and there is no further evidence for intensive use of the backlands. This sequence may reflect the commercial decline and shrinkage of Scottish burghs in the 14th century. Medieval pits were found in both Areas A and B, and midden deposits were also present in Area B, becoming more substantial lower down the slope to the north. More surprising is the presence of a stone-walled structure, apparently of medieval date, buried beneath midden deposits at the north end of Area B. Due to the restricted area available for excavation in this deeply stratified part of the site, the layout and function of the walls remain unclear.

The buildings assigned to Phase 2 in Area A are certainly post-medieval, and existed by the early 17th century, probably corresponding to a historically documented construction boom in the late 16th and early 17th centuries. This took place in the context of a period of economic prosperity, during which Scotland's foreign trade was all but monopolised by a small and extremely wealthy elite of Edinburgh burgesses (Whyte 1995: 279; Brown 1987: 126-7). A significant proportion of this wealth was invested in urban property to accommodate an expanding population. By the 1630s, however, the economic boom was ending, and the vicissitudes of military occupation, heavy taxation and disruption of trade during the 1640s bankrupted many prominent Edinburgh merchants. To this was added a plague in 1645 which killed a fifth of the town's inhabitants (Lynch 1987: 17–18). Mid 17th-century urban decline was part of a general European phenomenon. Recovery in the later 18th century took place on a different basis: while many cities stagnated or declined, others – including Edinburgh – were stimulated by the expansion of central government (de Vries 1984).

Building in the early modern period was structured by the narrow burgage plots inherited from the medieval burgh, which were filled in and subdivided into multiple ownership. Typically, between four and six 'lands' were accessed by a Close along the east side of the plot. Parts of the backlands at Jeffrey Street were already built up in the early 16th century according to the documentary evidence, when a particular feature of the area seems to be a number of 'great buildings' located towards the north end of the plots. Perhaps this was a favoured location due to the presence of a steep slope immediately to the north, clearly shown on Slezer's 'Prospect of Edinburgh from the North', c. 1690 (Barrott 2000: 16), which would have made building between here and the wall of the Trinity College Church particularly difficult. In any case, 17th- and 18th-century maps show that much of this area was open ground, with a number of gardens which, combined with an open view, would have made for a more pleasant environment than the more crowded and enclosed areas of the town.

The Phase 2 cellars in Area Amay correspond to two such 'great buildings'. It is clear from the documentary sources that buildings of at least three storeys existed on Plots 5 and 6 in the early 17th century, with multiple dwellings on different floors. The finely built walls and moulded stone steps and doorframes of the excavated cellars suggest these were substantial multi-storey buildings which represented a considerable investment in these properties. They can be compared with the buildings excavated along the former Marlin's Wynd beneath the Tron Kirk, nearby on the south side of the High Street (Holmes 1975). They are also roughly contemporary with the oldest surviving domestic buildings in Edinburgh, such as Gladstone's Land and the so-called 'John Knox's House', whose architecture demonstrates the prevalence by the late 16th century of separate ownership of flats within tenement buildings of five storeys or more (Stell & Tait forthcoming). Whereas the majority of buildings at the time of the Reformation were still wooden, the widespread rebuilding in Scottish towns at this time was mostly in stone, not least because of building regulations that tended to prohibit wooden buildings as a fire risk (Whyte 1995: 188).

The cellars on the Tron Kirk site were clearly used for domestic occupation, as they had fireplaces and plastered walls. On Plot 5 (west of Paisley Close), the three-roomed building to the south featured fireplaces, and the quantity and character of debris in the floor deposits also indicate that it was inhabited. The cellar immediately to the north had a similar black sandy floor, the walls were rendered and, it is suggested, this room also originally had a fireplace which was removed when the corner of the building was remodelled. This perhaps coincided with a change to use for storage. The cellars in Plot 6, to the east of Paisley Close, may have been used for storage from the outset, since the floor of the north cellar consisted of a layer of clean sand, and there was no evidence of a fireplace. The distinction between a ground floor 'laich hous' and a cellar was probably flexible on a sloping site, where the lowest floor of a building might be cut deep into the ground at the upslope end, but level with the original ground surface at the downslope end; and some such rooms may have been used interchangeably as dwellings or stores.

The importation of sand for flooring material continues a long-established practice (Ewan 1990: 19). Usually the sand would have been covered by straw or rushes, and periodically removed and replaced. Sand would have been readily available near the shore at Leith, where pits of medieval and early modern date have been commonly found in excavations (eg Masser forthcoming). Provision of flooring material may account for many of the pits found on urban backland sites, as well as for the midden deposits with which they were backfilled. As on the Tron Kirk site (Holmes 1975: 162), stone box-culverts provided drainage, routed beneath the cellar floors and (at Jeffrey Street) beneath the paving of one of the closes. Contemporary accounts, which contrast the splendour of early modern Edinburgh's buildings with the squalor of its streets and the problems of sewage and refuse disposal, have been widely quoted but perhaps present a one-sided view of conditions in the town.

Characteristically, early 'flatted' dwellings would have provided separate access to different floors via a turnpike stair (as seen, for instance, on the Tron Kirk site). The cellar at the north end of Plot 5 had its own access via a flight of steps from Paisley Close. Access to the three-roomed building to the south was also directly from the street into the southern room, where a door onto Bailie Fyfe's Close was blocked, and perhaps replaced by one opening onto Paisley Close: this may reflect the House Mails book description, which mentions properties on the west side of Paisley Close and also the east side of Bailie Fyfe's Close, implying that the original arrangement whereby properties were accessed from the Close to the east had broken down. The steps providing access to the cellars on Plot 6 may have provided separate access from Paisley Close, but more likely were an internal feature, connecting the cellars to a first-floor dwelling.

Multiple ownership within flatted tenement buildings is an enduring feature of Scottish urban architecture, dating back to the late 16th century if not earlier. In Edinburgh, particularly, it has traditionally been explained as a response to overcrowding, which fails to explain why flatting was not adopted in densely populated English cities, and also why flatted accommodation also appears at an early date in other Scottish towns where lack of space was not a problem (Stell 1988: 71-3). The system of legal tenure undoubtedly played an important part: the boundaries of burgage plots were strictly enforced in Scottish burghs, and Scots law did not discourage multiple ownership over a single solum. However, a wider cultural tolerance or even preference for living in flats, contrasting with attitudes in England, was inextricably linked with these legal factors (Stell & Tait forthcoming). One outcome of the prevalence of flatted dwellings was that social status in early modern Edinburgh was defined not so much in terms of rich and poor areas of town, but vertically, in terms of which part of the building one inhabited. In an echo, perhaps, of the 15th-16th-century tower house (Samson 1990), the most prestigious apartments tended to be situated on the first floor or the middle floors more generally, while cellars and garrets housed the lower orders. The documentary evidence for the occupants of the area within and around the Jeffrey Street site supports this traditional picture of rich and poor living 'cheek by jowl'. Social stratification within early modern Scottish burghs was highly developed and finely differentiated (Whyte 1995: 191-4), however, and defining and maintaining status in this situation must have demanded different strategies from the more familiar recourse of segregation into highand low-status districts. The wholesale removal of the gentry to the New Town in the 1770s-80s, and the rapid decline of the Old Town that followed (Stevenson et al 1981: 10), should perhaps be seen as the final resolution of the tensions and contradictions engendered by the traditions of building in early modern Edinburgh.

The backfilling of the north cellar to the east of Paisley Close in the 1640s probably followed the demolition of the whole building. The reason for its demolition is unclear, but is difficult to see as 'improvement' since the structure that replaced it - possibly after a considerable interval - was apparently small and crudely built in comparison. Some disaster such as a fire, or neglect and dereliction in the troubled times of the 1640s, may have been responsible. Whatever the reason, the cellar clearly became a convenient place for dumping refuse, which perhaps came from neighbouring plots, and which provides a highly significant sample for studying patterns of consumption in the city at this time. The finds and animal bone assemblages from the north cellar are characteristic of domestic waste, rather than industrial processes: in particular, and in contrast to the recent excavations at St Patrick's Church on the Cowgate (Jones forthcoming), horn cores and horse remains, indicative of slaughtering, bone-working and tanning, were absent. Among ceramics and other finds of local manufacture were

a number of high-status imports, which suggest the presence of a wealthy household or a merchant. However, the refuse in the cellar would have been extremely malodorous and most likely a public nuisance. Some disruption and dereliction, not just of this property but of the surrounding area, can be inferred.

Area B seems to have been built up considerably later than Area A: historical records do not refer to any 'great dwellings' on Plots 1 and 2 in the early 16th century, and the 1635 House Mails book suggests that the north end of one or both plots was derelict at this date. Extensive disturbance from the 19th-century tannery may have removed much of the archaeological evidence, and the earliest layout of this part of the site is much less clear. However, the earliest buildings here (apart from the deeply buried medieval walls at the north end) appear to date to the late 17th or early 18th century, when the

layout depicted on Edgar's map (illus 4) may have become established. This shows a series of detached buildings with open yards in between, which may have been small workshops rather than tenement buildings.

Following the time of the 'great dwellings', the status of this area seems to have declined: none of the 17th-century and later buildings in either area are as well-built as the Phase 2 cellars in Area A. Whether this was a localised decline, or representative of a more general trend whereby once prestigious neighbourhoods became increasingly urbanised, industrialised and socially mixed, while the wealthy migrated to newly built suburbs, is less certain. In any case, however, the late 16th and 17th centuries arguably represent the *floruit* of the Old Town, a period of dramatic change that has been much discussed by historians but has seen rather less attention from archaeologists.

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# 10 APPENDIX: RESULTS OF INDUCTIVELY-COUPLED PLASMA ANALYSIS OF REDWARE AND MAIOLICA

Ten redware sherds and twelve tin-glazed wares were selected for analysis. The tin-glazed wares includes the two maiolica tiles and three sherds of defitware tile.

#### 10.1 Redware

Identification of the place of production of a ceramic depends upon there being available for comparison ICP analyses of reference ceramics of known origin. It is then possible to use statistical testing procedures to see whether the analyses of the 'test' samples (from Jeffrey St) match with previously analysed groups. For the redwares, a large database of ICP analyses of Scottish redwares has been assembled by George Haggarty, and this database was kindly made available for comparison with the Jeffrey Street samples. The Scottish redware ICP project has analysed ceramics from numerous sites and production centres (Chenery et al 2001).

An initial run of principal components analysis on the ICP results of all the redwares from Jeffrey St indicated that there were chemical sub-groups within the analyses. Of the ten redware items analysed from Jeffrey Street, the analyses of two, JSE1 and JSE4 are significantly different from the rest, but have very similar analyses to each other, suggesting a common place of production. Another principal components analysis was run to compare these two with the ICP analyses of Low Countries reference ceramics in the Scottish redware database. This indicated that they fell chemically between reference groups from Utrecht and Harlem; JSE1 is nearer to Harlem, JSE4 to Utrecht. They are thus confirmed as Low Countries products.

The rest of the redware selected from Jeffrey St all has fairly similar chemistry and is likely to be of local Scottish production. The items are readily distinguishable from the Low Countries ceramics in ICP analysis, but as a whole they have sufficiently similar analyses to suggest a single region of production, different from those two items. The principal components analysis was repeated after combining the Jeffrey St analyses (with the exception of JSE 1 and 4) with previous analyses taken from the Scottish redware ICP database from three sites in Edinburgh: Canongate, Chambers Street and the Castle, and the analyses of Low Countries reference ceramics. Principal components analysis indicated some sub-groups among the Jeffrey St redwares:

JSE 2 and 3 (flat slipwares) are similar to the chemistry of the redware group from Canongate, Edinburgh. Also, the two are very similar chemically to each other, which suggests they may be from the same production batch.

JSE 6, 7 and 10 (skillet and dishes) are similar to the redware group from Chambers Street, Edinburgh.

JSE 5, 8 and 9 (jars and a pot) fall in chemistry near to the redware group from Edinburgh Castle. However, they do not exactly overlap in chemistry with the Castle group (especially on the plot of the first two principal components, not shown) and it is possible that they are from another site in Edinburgh or elsewhere.

#### 10.2 Maiolica and delftware

The two maiolica tiles (JSE21 and JSE22) stand out from the rest. The tiles have quite similar ICP analyses to each other but significantly low sodium and differ in the concentrations of a number of other elements to the rest of the tin-glazed ware analyses. Analysis by NAA and ICP of tiles from Whitehall, London showed these to be made in Antwerp (Gaimster & Hughes 1999). However, the Whitehall Palace tile is quite different chemically to the Jeffrey Street tiles. Visual comparison of the analyses of the maiolica tiles with that of tiles produced at the Pickleherring pothouse in London (Hughes 2008) showed similarities. However doubts about this led to a closer statistical analysis on the maiolica tiles with a database of ICP analyses on Antwerp pottery and tiles, including a Whitehall tile. This showed the maiolica tiles fell into the middle of the chemical range of typical Antwerp products, and confirmed them as being from Antwerp. Among ceramics in the database showing similarities to them were some of the previously-analysed Antwerp tiles from Hill Hall, Essex (Hughes 2009b) and a tile from Chateau Rameyen thought to be a Herkenrode tile.

Re-examination of the Pickleherring analyses indicated that the differences between its products and those of Antwerp lay mostly in the trace elements measured by the mass spectrometry version of ICP (Hughes 2008: 125, table 27), which has been relatively little used until recent years. The relative merits of the conventional ICP analysis used in the majority of published provenance studies and the mass spectrometry version, were discussed in that study which concluded that for distinguishing London and Low Countries tin-glazed ceramics, the best chance of success lay in the combined analyses of both techniques. The present study has fully supported that conclusion. Statistical study using discriminant analysis of the London delftwares (op cit) shows that each pothouse has a characteristic clay chemistry which differs from that of other London pothouses. Pickleherring seems to be the only pothouse with clay chemistry approaching that of Antwerp ceramics, hence the initial finding of similarity.

The rest of the Jeffrey Street tin-glazed wares have fairly similar chemistry, which would suggest one general region for them all, and the stylistic and chemical evidence would point towards the Low Countries. There are no similarities at all to material from London delftware factories analysed in Hughes (2008). There are some apparent sub-groups among the tin-glazed ware analyses, which might indicate different production cities, or different production centres within one city. For example, previous analytical work by neutron activation (published in Hughes & Gaimster 1999) showed several different chemistries for tin-glazed ware produced at different sites within Antwerp.

The ICP analyses of the tin-glazed ware were combined with a small ICP database of Low Countries tin-glazed ceramic tiles and pottery. There appear to be several chemical sub-groups in the tin-glazed ware analyses, which are the following:

JSE 14 (dish base) and 15 (flatware) are a very close chemical match to each other. JSE 11–13 bare tiles: 11 with combed red and white slip, 12 with a purple corner motif and 13 with a biblical scene in blue – tiles 12 and 13 are very similar to each other in chemical analysis. These five are close to a tile from Guildford Museum, which in a previous study was compared with neutron activation analyses of Low Countries tin-glazed pottery and shown to be similar in chemistry to ceramics made at Antwerp.

Three other items, JSE 17 (dish/plate), 19 (hollow ware) and 20 (dish/plate) form another group perhaps related to the first group. JSE 19 and 20 are a close chemical pair. The closest group to these three from the database ceramics are three tiles found in London and recently analysed for the Museum of London (Hughes 2009a). It was concluded that the London tiles are Antwerp products, and by extension, it would suggest that this second group from Jeffrey St may also be Antwerp products.

JSE 16 (storage jar) and JSE 18 (hollow ware)

have a more distant relationship to the others from Jeffrey St, and seem to be chemically similar to each other. In previous reports on their analyses, it was concluded that these four database ceramics were Antwerp products. It may be significant that in contrast to the tiles and flatwares (except JSE 19) of the first two groups of Jeffrey St maiolica, the two hollow wares (JSE 16 and JSE 18) have a closer analytical similarity to 'Malling jugs' within the database.

There are unfortunately relatively few ICP analyses of definite Low Countries tin-glazed ware apart from those in the database used here. It would greatly assist in identifying Low Countries products if there were a systematic programme of ICP analyses of ceramics from known production centres, analogous to the neutron activation analyses made in the 1990s (Hughes & Gaimster 1999). As an interim measure, it would be possible to convert the latter database to be compatible with ICP – but time has not allowed this to happen for use in the project on Jeffrey St ceramics.

#### 10.3 Conclusions

The results of the ICP analyses of redware and maiolica from Jeffrey St have identified two items of Dutch redware, the rest being Scottish, with apparently close links to redwares found at other sites in Edinburgh. All the maiolica and delftware analysed was made in the Low Countries, with a strong probability of being made at Antwerp.

#### 10.4 Illustrations of ICP sampled sherds

JSE 1= illus 26.23; JSE 2= illus 24.2; JSE 3= illus 27.26; JSE 4= illus 28.55; JSE 5= illus 24.3; JSE 6= illus 29.31; JSE 7= illus 29.35; JSE 8= illus 24.4; JSE 9= illus 24.7; JSE 10= illus 24.5; JSE 11= illus 28.56; JSE 12= illus 26.25; JSE 13= illus 26.24; JSE 14= illus 26.20; JSE 15= illus 24.1; JSE 16= illus 29.33; JSE 17= illus 28.51; JSE 18= illus 28.53; JSE 19= illus 29.30; JSE 20= illus 28.50; JSE 21= illus 31.47; JSE 22= illus 31.48.

## 11 DOCUMENTARY SOURCES

#### 11.1 ECA = Edinburgh City Archives

- DoG = Dean of Guild Court Application for Warrant, with name of petitioner, property concerned and date, whether extracted or not.
- DoG 1762 = Haig and Proc Fiscal, Bailie Fyfe's Close, 27 Oct 1762, extracted.
- DoG 1773a = Lamb and Scyth, North Gray's Close, 24 Feb 1773, extracted.
- DoG 1773b = William Gordon, Smith's Back Land, 16 Dec 1773, extracted.
- DoG 1774 = David Somerville, Bailie Fyfe's Close, 18 May 1774, unextracted.
- DoG 1775 = Dr John Stevenson, North Gray's Close, 29 Mar 1775, unextracted.
- DoG 1780 = William Fettes, Bailie Fyfe's Close, 6 July 1780, extracted.
- DoG 1790 = William Lamb, Gray's Close, 29 July 1790, extracted.
- DoG1816 = John Stewart, North Gray's Close, East Side, 20 Dec 1816, extracted.
- DoG 1830 = Capt C H Watson, Bailie Fyfe's Close, 24 Mar 1830, extracted.
- DoG 1863 = Skiffington and others, 105–109 High St, 4 Sept 1863, extracted.
- HTB 1635 = House Mails Taxation Book 1635, book of the rate of all housemails and duty to be paid, 1634–6
- PBG I = Protocol Book of Alexander Guthrie (Sen), Vol. I, 1556–61, Card Index.
- PBG III = Protocol Book of Alexander Guthrie (Sen), Vol. III, 1562–1565 and after, Card Index.

PBK = Protocol Book of Alexander King, Vol. 5, 1555–63, transcription by M Wood, 1954.

#### 11.2 NAS = National Archives of Scotland

- CC8/8/59/453-4 John Charteris, Merchant Burgess of Edinburgh, Testament Dative & Inventory, reg 1 Sept 1640.
- CC8/8/60/266–8 James Dischingtoun, Pantounheelmaker, Burgess of Edinburgh, Testament Testamentary & Inventory, reg 1 July 1642.
- CC8/8/60/394–8 John Morrison, Merchant Burgess of Edinburgh, Testament Testamentary & Inventory, reg 19 Dec 1642.
- CC8/8/67/376 Duncan Arroll, Tailor, Burgess of Edinburgh, Testament Dative & Inventory, reg 16 Sept 1653.

#### 11.3 Historic maps

Edgar, W City and castle of Edinburgh (1742) Ordnance Survey 1:1056 Town Plan of Edinburgh sheet 36 (1854)

Ordnance Survey 1:1056 Town Plan of Edinburgh sheet 36 (1881)

Ordnance Survey 1:500 Town Plan of Edinburgh sheet III.8.11 (1895)

## 12 REFERENCES

- Archer, M 1997 Delftware the tin-glazed earthenware of the British Isles: A catalogue of the collection in the Victoria and Albert Museum. London: HMSO.
- Barker, D & Crompton, S 2007 Slipware in the Collection of the Potteries Museum & Art Gallery. London: A & C Black.
- Barrott, H N 2000 An Atlas of Old Edinburgh. Edinburgh: West Port Books.
- Baumann, P 2004 Collecting Antique Marbles. Iola, WI, USA: KP Books.
- Berg, J & Lagercrantz, B 1962 Scots in Sweden. Stockholm (online books, www.electricscotland.com, Seventeenth Century, Part 2).
- Biddle, M; Barfield, L & Millard, A 1959 'The Excavation of the Manor of the More, Rickmansworth, Hertfordshire', *Archaeological Journal* 116, 136–199.
- Birrell, JF 1980 An Edinburgh Alphabet. Edinburgh: James Thin.
- Boog Watson, C B 1923 'Notes on the Names of the Closes and Wynds of Old Edinburgh', *Book Old* Edinburgh Club 12, 1–156.
- Boog Watson, C B 1924 'List of owners of Property in Edinburgh, 1635', *Book Old Edinburgh Club* 13 (1924), 93–146.
- Boog Watson, C B 1929–36 Roll of Edinburgh Burgesses and Guild Brethren, 1406–1700, 1701–60, and 1761–1841 (Scottish Records Society Vols 59, 62 and 68, Edinburgh) accessed at www. scotsfind.org/burgesses\_access/burgesses.pdf, on 29 Mar 2009.
- Brown, J J 1987 'Merchant Princes and mercantile investment in early 17th-century Scotland', in M Lynch (ed.) *The Early Modern Town in Scotland*. London: Croom Helm, 125–146.
- Caldwell, D H & Dean, V E 1992 'The pottery industry at Throsk, Stirlingshire, in the 17th and early 18th century', *Post Medieval Archaeology* 26, 1–46.
- Cerón-Carrasco, R 2000 'The fish remains'. Unpublished Archive Report (Excavations in advance of the New Scottish Parliament), Headland Archaeology Ltd.
- Chenery, S; Phillips, E & Haggarty, G 2001 'An evaluation of geochemical fingerprinting for the provenancing of Scottish red ware pottery', *Medieval Ceramics* 25, 45–53.
- Cox, A 2002 'Artefacts from Kelso',6 in P J Dixon; J R Mackenzie; D R Perry & P Sharman 2002 The Origins of the Settlement at Kelso and Peebles, Scottish Borders: Archaeological Excavations in Kelso and Floors Castle and Cuddyside/Bridgegate, Peebles, by the Border Burghs Archaeology Project and the Scottish Urban Archaeologi-

- cal Trust, 1983–1994, Scottish Archaeological Internet Reports 2 (www.sair.org.uk), 107–115.
- Cox, A & Hall, D 2008 'Summary of the artefactual evidence for Periods 1–5', in Holyrood Archaeology Project Team Scotland's Parliament Site and the Canongate: Archaeology and History. Society of Antiquaries of Scotland, Edinburgh, 33–51.
- Cruikshank, G 1987 *Scottish Pottery*. Princes Risborough: Shire Publications.
- Dalland, M forthcoming 'The King's Wall: Excavations at 144–166 Cowgate, Edinburgh'.
- de Vries, J 1984 English Urbanisation 1500–1800. Harvard University Press.
- Dowden, J 1912 The Bishops of Scotland. Glasgow. Dumbrell, R 1983 Understanding Antique Wine Bottles. Woodbridge, Suffolk: Antique Collectors Club.
- Dumortier, C 1999 'Maiolica Production in Antwerp: The Documentary Evidence', in D Gaimster (ed) Maiolica in the North: The Archaeology of Tin-Glazed Earthenware in North-West Europe c.1500–1600. British Museum Occasional Paper No. 122, 107–111 & col. pl. 1.
- Edwards, D & Hampson, R 2005. White Salt-Glazed Stoneware of the British Isles. Woodbridge, Suffolk: Antique Collectors' Club.
- Egan, G 2005 Material culture in London in an age of transition: Tudor and Stuart period finds c. 1450-c. 1700 from excavations at riverside sites in Southwark, MoLAS Monograph 19. London: Museum of London Archaeological Service.
- Ewan, E 1990 Townlife in Fourteenth-Century Scotland. Edinburgh: Edinburgh University Press
- Franklin, J forthcoming 'Finds Report for Excavations at Tower St, Leith', *Scottish Archaeological Internet Reports*.
- Gaimster D 1997 German Stoneware 1200–1900: Archaeology and Cultural History. London: British Museum Press.
- Gaimster, D & Hughes, M 1999 'South Netherlands Maiolica floor tiles from the Broad Arrow Tower, Tower of London', *in* D Gaimster, 175–180.
- Gaimster, D & Nenk, B 1997 'English Households in Transition c. 1450–1550: the ceramic evidence', in D Gaimster & P Stamper The Age of Transition: The Archaeology of English Culture 1400–1600, Society for Medieval Archaeology monograph 15; Oxbow monograph 98, 171–195.
- Gallagher, D B 1987 'The 17th century: the documentary evidence', 'Edinburgh pipemakers pre–1800', 'Tobacco Pipemaking in Glasgow, 1667–1967', in P Davey (ed) *The Archaeology of the Clay Tobacco Pipe, vol X: Scotland.* Oxford (BAR Brit Ser 178), 3–13, 29–34, 35–109.

- Gilhooley, J 1988 *A Directory of Edinburgh in 1752*. Edinburgh: Edinburgh University Press.
- Goggin, J M 1960 'The Spanish Olive Jar: an introductory study', *Yale University Publications on Anthropology* LXII.
- Green, C 1999 John Dwight's Fulham Pottery: Excavations 1971–79, English Heritage Archaeology Report 6.
- Haggarty, G 2006a A gazetteer and summary of French pottery in Scotland c. 1150–c. 1650, Edinburgh: National Museums of Scotland.
- Haggarty, G 2006b 'West Pans Pottery Resource Disk', Northern Ceramic Society Journal 22.
- Haggarty, G 2009 'Morrison's Haven, East Lothian, Scotland, Ceramic Resource Disk', Edinburgh.
- Haggarty, G; Hall, D & Jones, R 2011 'Sourcing Scottish medieval ceramics the use and success of chemical analysis', *Proceedings of the Society of Antiquaries of Scotland* 141, 249–267.
- Harris, S 2002 The Place Names of Edinburgh, London: Steve Savage.
- Harrison, J G 2002 'The Pottery at Throsk, Stirlingshire c. 1600–c. 1800: context, links and survival', Proceedings of the Society of Antiquaries of Scotland 132, 459–473.
- Henderson, D 2001 'Final report on the faunal and fish remains from 40–43 Water Street'. Unpublished Archive Report, Headland Archaeology Ltd.
- Hindmarch, E 2005 'Auldhame (Whitekirk and Tyninghame Parish), Early Christian Cemetery', *Discovery and Excavation Scotland* 6, 57–8.
- Holmes, N 1975 'Excavations within the Tron Kirk, Edinburgh, 1974', *Post-Medieval Archaeology* 9, 137–163.
- Holmes, N 1998 Scottish Coins: A History of Small Change in Scotland. Edinburgh: National Museums of Scotland.
- Hughes, M 2008 'Inductively coupled plasma analysis of tin-glazed tiles and vessels produced at several centres in London', in K Tyler; I Betts & R Stephenson London's delftware industry: The tin-glazed pottery industries of Southwark and Lambeth, MoLAS Monograph 40. London: Museum of London Archaeological Service, 120–131.
- Hughes, M J 2009a 'Inductively-coupled plasma analysis (ICP) of six tin-glazed tiles found in London', unpublished report for the Museum of London.
- Hughes, M J 2009b 'ICP-AES analysis of ceramic building material', in P Drury Hill Hall, a singular house devised by a Tudor intellectual. London: The Society of Antiquaries of London, 366–379.
- Hughes, M & Gaimster, D 1999 'Neutron activation analyses of maiolica from London, Norwich, the Low Countries and Italy', *in* D Gaimster, 57–89.
- Hume, I N 1976 A Guide to the Artifacts of Colonial America. Philadelphia.
- Hurst, J G; Neal, D S & van Beuningen, H J E 1986 Pottery produced and traded in north-

- west Europe 1350–1650 (Rotterdam Papers VI), Rotterdam.
- Hurst, J G & Le Patourel, J 1999 'Imported maiolica floor tiles from Whitehall Palace, London', *in* D Gaimster, 181–184.
- Inglis, J A 1935 Sir Adam Otterburn of Redhall, King's Advocate 1524–1538. Glasgow: Jackson, Wylie.
- Jennings, S 1981 Eighteen centuries of pottery from Norwich (East Anglian Archaeology Report No13), Norwich.
- Jones, E 2010 'Through the Cowgate: Life in 15thcentury Edinburgh as revealed by excavations at St Patrick's Church'. Scottish Archaeology Internet Report 42.
- Le Cheminant, R 1982 'The Development of the Pipeclay Hair Curler A Preliminary Study', in P Davey (ed) The Archaeology of the Clay Tobacco Pipe Vol VII: More Pipes & Kilns from England, BAR Brit Ser 100, Oxford: British Archaeological Reports, 345–54.
- Lynch, M 1987 'Introduction: Scottish Towns 1500–1700', in M Lynch (ed.) The Early Modern Town in Scotland. London: Croom Helm, 1–35.
- Masser, P 2002 The Tannery Site, Jeffrey Street, Edinburgh: an archaeological evaluation. Headland Archaeology: unpublished client report.
- Masser, P forthcoming 'Excavations at Giles Street, Leith'.
- Masser, P & Kimber, M 2008 'Archaeological Excavation to rear of 43 Jeffrey Street'. Edinburgh. Headland Archaeology: unpublished client report.
- McMeekin, J forthcoming 'Beetles and Bullocks: Early Historic settlement beneath the Grass-market in Edinburgh', Scottish Archaeological Internet Reports.
- Mountford, A R 1971 The Illustrated Guide to Staffordshire Salt-Glazed Stoneware. London: Barrie & Jenkins.
- Mullay, S 1996 An Edinburgh Encyclopedia, Edinburgh: Mainstream.
- PBF I = Protocol Book of John Foular I, 1500–1 to 1503, Wood, M (ed), 1930, Edinburgh.
- PBF I (ctd) = Protocol Book of John Foular I (contd), 1503 to 1513, Wood, M (ed), 1941, Edinburgh.
- PBF III = Protocol Book of John Foular II and III, 1514 to 1528, Wood, M (ed), 1953, Edinburgh.
- PBF IV= Protocol Book of John Foular IV, 1528 to 1534, Durkan, J (ed), 1985, Edinburgh.
- Pluis, J 1997 De Nederlandse Tegel: décor en benamingen 1570–1930 (The Dutch Tile: designs and names). Leiden.
- Ray, A 1973 English Delftware Tiles. London: Faber. RMS III = Register of the Great Seal of Scotland III, 1513–1546, Edinburgh (reprinted 1984).
- RMS VIII = Register of the Great Seal of Scotland VIII, 1620–1633. Edinburgh (reprinted 1984).
- Ruckley, N A 1997 'The Geological Setting' in ST Driscoll & PA Yeoman Excavations within Edinburgh Castle in 1988–91 (Society of Anti-

- quaries of Scotland Monograph no. 12), 15–21. Edinburgh: Society of Antiquaries of Scotland.
- Samson, R 1990 'The Rise and Fall of Tower-Houses in Post-Reformation Scotland' in R Samson (ed), The Social Archaeology of Houses, 197–244. Edinburgh: EUP, 1990.
- Schofield, J 1978 'Excavations south of Edinburgh High Street, 1973–4', Proceedings of the Society of Antiquaries of Scotland 107, 155–241.
- Smith, C 1997 'Animal bone' in C Moloney and R Coleman, 'The development of a medieval street frontage: the evidence from excavations at 80–86 High Street, Perth', Proceedings of the Society of Antiquaries of Scotland 127, 767–773.
- Smith, C 2006 The Animal Bone from Cowgate, Edinburgh. Unpublished Archive Report, Headland Archaeology Ltd.
- Smith, C 2007 The Mammalian, Bird and Molluscan Remains. Unpublished Archive Report (Excavations in advance of the New Scottish Parliament), Headland Archaeology Ltd.
- Smith, C and Henderson, D 2002 'The animal bone' in P J Dixon; J R Mackenzie; D R Perry and P Sharman, 'The origins of the settlements at Kelso and Peebles, Scottish Borders'. SAIR 2, 126–130.
- Stell, G 1988 'Urban Buildings', in M Lynch; M Spearman and G Stell, *The Scottish Medieval Town*, 60–80. Edinburgh: John Donald.
- Stell, G and Tait, R forthcoming, *Early Flatting in Scotland*.

- Stevenson, S; Simpson, A & Holmes, N 1981 Historic Edinburgh, Canongate & Leith the archaeological implications of development, Scottish Burgh Survey.
- Tait, R 2006 'Configuration and dimensions of burgage plots in the burgh of Edinburgh', *Proceedings of the Society of Antiquaries of Scotland* 136, 297–310.
- Tourunen, A 2007. 'Faunal remains from St Patrick's Church, Cowgate, Edinburgh'. Unpublished Archive Report, Headland Archaeology Ltd.
- Tourunen, A 2008 'Faunal remains assessment', in P Masser and M Kimber *ibid*, 28–9.
- Turnbull, J 2001 The Scottish Glass Industry 1610–1750 'To serve the whole nation with glass'. Society of Antiquaries of Scotland Monograph 18. Edinburgh: Society of Antiquaries of Scotland.
- Tyler, K; Betts, I and Stephenson, R 2008 London's delftware industry: The tin-glazed pottery industries of Southwark and Lambeth. MoLAS Monograph 40. London: Museum of London Archaeological Service.
- Whyte, I D 1995 Scotland before the Industrial Revolution: An economic and social history c. 1050–c. 1750. Edinburgh: Edinburgh University Press.
- Willmott, H 2002 Early Post-Medieval Vessel Glass in England c. 1500–1670, CBA Research Report 132. York: Council for British Archaeology.