



ARO21: Brief encounters: watching the medieval archaeology emerge from St John's Square, Perth

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Àrainneachd Eachdraidheil Alba

ARO21: Brief encounters: watching the medieval archaeology emerge from St John's Square, Perth

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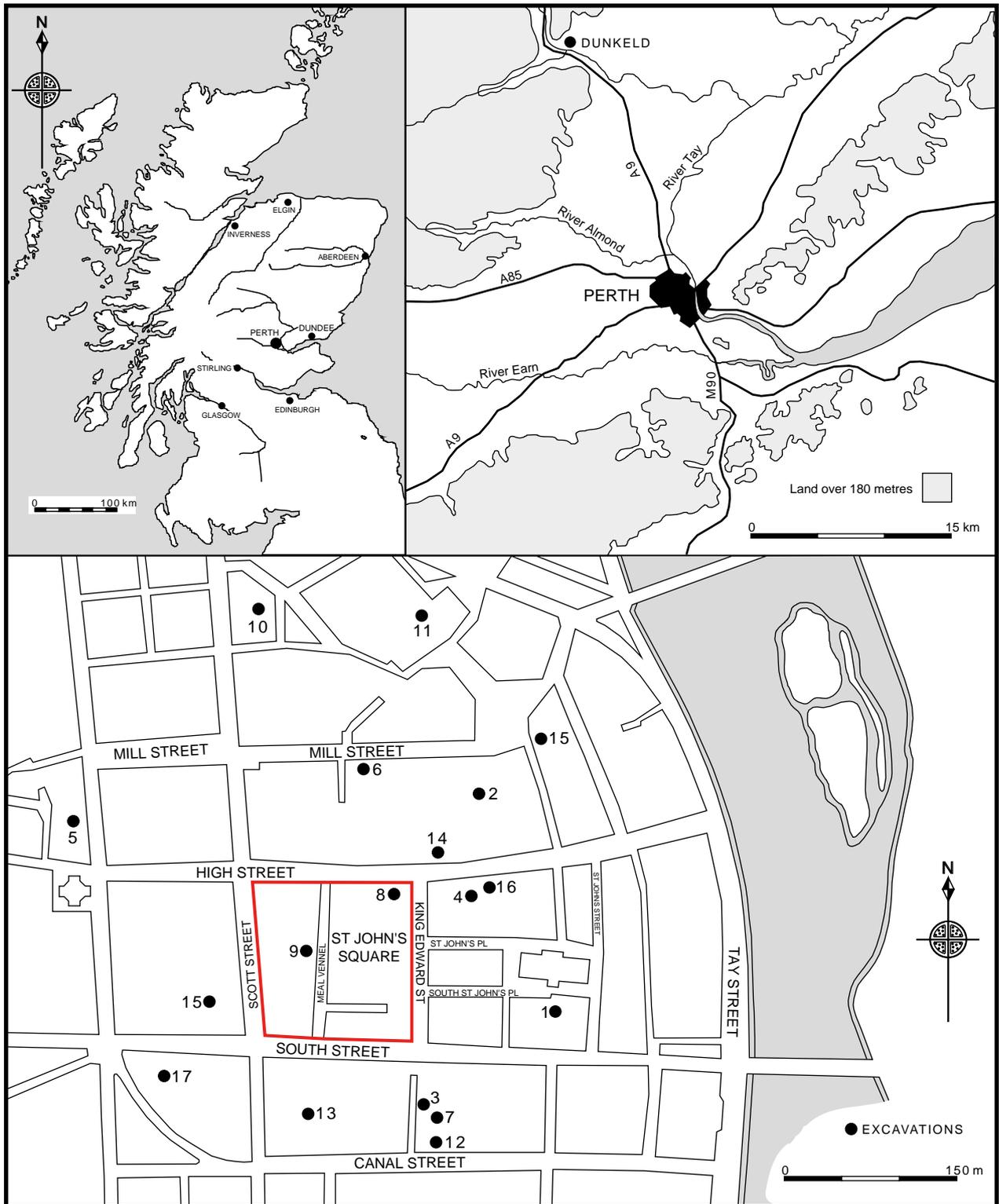
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- | | |
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| 2 Marks and Spencer, 1975-77 | 11 Blackfriars House, 1984 |
| 3 Canal Street I, 1978-79 | 12 Canal Street III, 1985 |
| 4 Kirk Close, 1979 | 13 Scott Street, 1989 |
| 5 South Methven Street, 1979-80 | 14 103 High Street, 1992 |
| 6 Mill Street, 1979-80 | 15 153-155 South Street, 1992 |
| 7 Canal Street II, 1980-81 | 16 80-86 High Street, 1992 |
| 8 King Edward Street, 1982 | 17 210-214 South Street, 1996 |
| 9 Meal Vennel, 1983 | |

Figure 1: Location plan showing previous excavations.

Abstract

Between August 1985 and April 1986, an extended archaeological watching brief, partly funded by the Manpower Services Commission, was undertaken by the Scottish Urban Archaeological Trust on the redevelopment of the St John's Square shopping centre in the heart of Perth. Rich midden deposits, floor surfaces, occupation deposits, structural timbers, pits and hearths were recorded and medieval finds of pottery, metal, bone, antler, leather and wooden artefacts were recovered. This paper (funded by Historic Scotland, now Historic Environment Scotland) presents the results of the fieldwork and post excavation analyses.

Introduction

A shopping centre with associated flats was built in the 1960s in St John's Square, Perth, on the east side of Meal Vennel (NGR: NO 118 235). By the 1980s the centre was run down and Grosvenor Developments, in association with Perth and Kinross District Council, proposed to redevelop the site for a new shopping centre, with car parking in Canal Street (Figure 1, Plate1). An area, equivalent to approximately 5% of the medieval town, was likely to be destroyed by the development. This included one whole street, Meal Vennel, where an excavation on its west side in 1983 revealed timber and stone buildings as well as evidence of industrial metal-working and grain-drying activities (Sermon and Cox 1996). Excavation in 1982 to the north-east of the proposed development, at the corner of High Street and King Edward Street, had also uncovered a complex sequence of timber buildings and metalworking activity (Clark and Blanchard 1995).

In view of the archaeological importance of these sites within the historic core of the medieval burgh, access had been negotiated for excavations at Meal Vennel, in a redundant school playground, and at Canal Street, intended to uncover the southern defences of the burgh. Both these sites were available in advance of development. St John's Square was not accessible until the demolition of the 1960s shopping centre, so here an extended watching brief on groundworks was agreed.

The site at Canal Street was excavated in 1985 (Coleman 1996) and the 1985-6 watching brief on St John's Square was undertaken by members of

the Canal Street excavation team, all employed on a programme funded by the Manpower Services Commission (MSC).

Limiting investigation to a watching brief, mainly on boring/piling operations, was unavoidable at the time, but of course regrettable; excavations by Nicholas Bogdan in 1975-77 at the site of the new Marks and Spencer store on Perth High Street (PHSAE) had uncovered abundant evidence for medieval occupation and craft activity (Bogdan 1980, 1982; Bogdan and Wordsworth 1978).

St John's Square was an extreme example of one of the most common types of archaeological projects – the watching brief¹ – undertaken across the UK at the time. This particular watching brief predated the introduction of *National Planning Policy Guideline 5* (NPPG 5) and *Planning Advice Note 42* (PAN 42) (Scottish Office 1994) and their successor *Scottish Planning Policy 23* (SPP23), (Scottish Government 2008), planning guidelines, which now controls development and archaeology. If this development were to happen today rather than in 1985, the way the archaeological work was to be undertaken would be very different. However, many of the problems experienced by the team at St John's Square are as common today as they were in 1985 despite

1 The Chartered Institute for Archaeologists *Standard and guidance for an archaeological watching brief* (published in 1994, revised in 1999, 2001, 2008 and 2014) provides the UK guidelines on the subject. It covers many aspects of watching briefs from definition, purpose and occurrence through to procedures for fieldwork, post-fieldwork analysis and reporting, monitoring, archiving and other considerations.

The stated purpose of the watching brief is firstly to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works; secondly to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard.

A watching brief is not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirements for contingent excavation or preservation of possible deposits.

The objective of a watching brief is to establish and make available information about the archaeological resource existing on a site (p.4).

the support of published planning guidelines concerning archaeology and development and local authority archaeologists (curators).

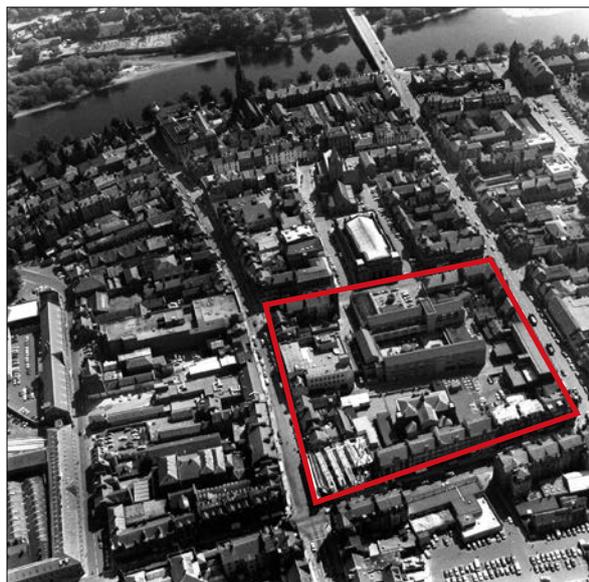


Plate 1: Perth Town Centre in 1975, showing the old St John's Square. (© RCAHMS, John Dewar Collection) The photo is aligned looking slightly SE.

Construction methods used by the developer

The development at St John's Square is the only instance in Perth of such intensive piling. Although mostly single-storey, the shopping centre was designed for lorry access over the flat roof. This had to be absolutely rigid to remain weatherproof, requiring massively robust foundations. Initial foundation plans indicated a total of 1,465 piles, but changes to the design during construction meant that at least 1,864 piles were inserted, an increase of almost 25% on the original proposal. In addition, some weak or misplaced piles had to be replaced, and in some cases the drilling encountered obstructions in the ground resulting in misaligned piles, which needed to be straightened (Plate 2).



Plate 2: Forest of piles including one misaligned pile (Trench 78, PEX 58), facing north.

The piles had a diameter of 0.45 m, a depth of between 6 and 10 m, and were closely spaced. The pile holes were drilled with a hollow mechanical auger, and filled with liquid concrete injected through the auger as it was withdrawn. A steel reinforcing cage was then pressed down into the liquid concrete. Only the deposits up-cast from the auger could be recorded. Even then, the speed of drilling and of progress from one pile to the next allowed the archaeological team to record only a minority of the pile holes (see Bowler 2004, 55ff; and Discussion, below). In addition to the damage caused to archaeological deposits and features by the drilling, a network of pile caps and ground beams linking the piles was inserted to a depth of about 0.6 m. This latter disturbance posed a lesser threat to the archaeological features than the drilling as it was confined to deposits of recent origin or previously disturbed levels. The removal of soil around the concrete piles was also a concern to the archaeological team during the watching brief, as this could not be monitored in safety.

Archaeological fieldwork methods

The fieldwork on the St John's site was undertaken between August 1985 and April 1986 by a team of four core members of a Manpower Services Commission (MSC) funded excavation team. The fieldwork involved only the monitoring and recording of foundation pile holes drilled by machine and the cleaning and recording of trenches dug by the developers (Figures 2 and 3). The health and safety aspects of working close to machinery were considerable and no trenches were dug by the archaeologists (Plate 3).



Plate 3: General view of the site looking north during construction.

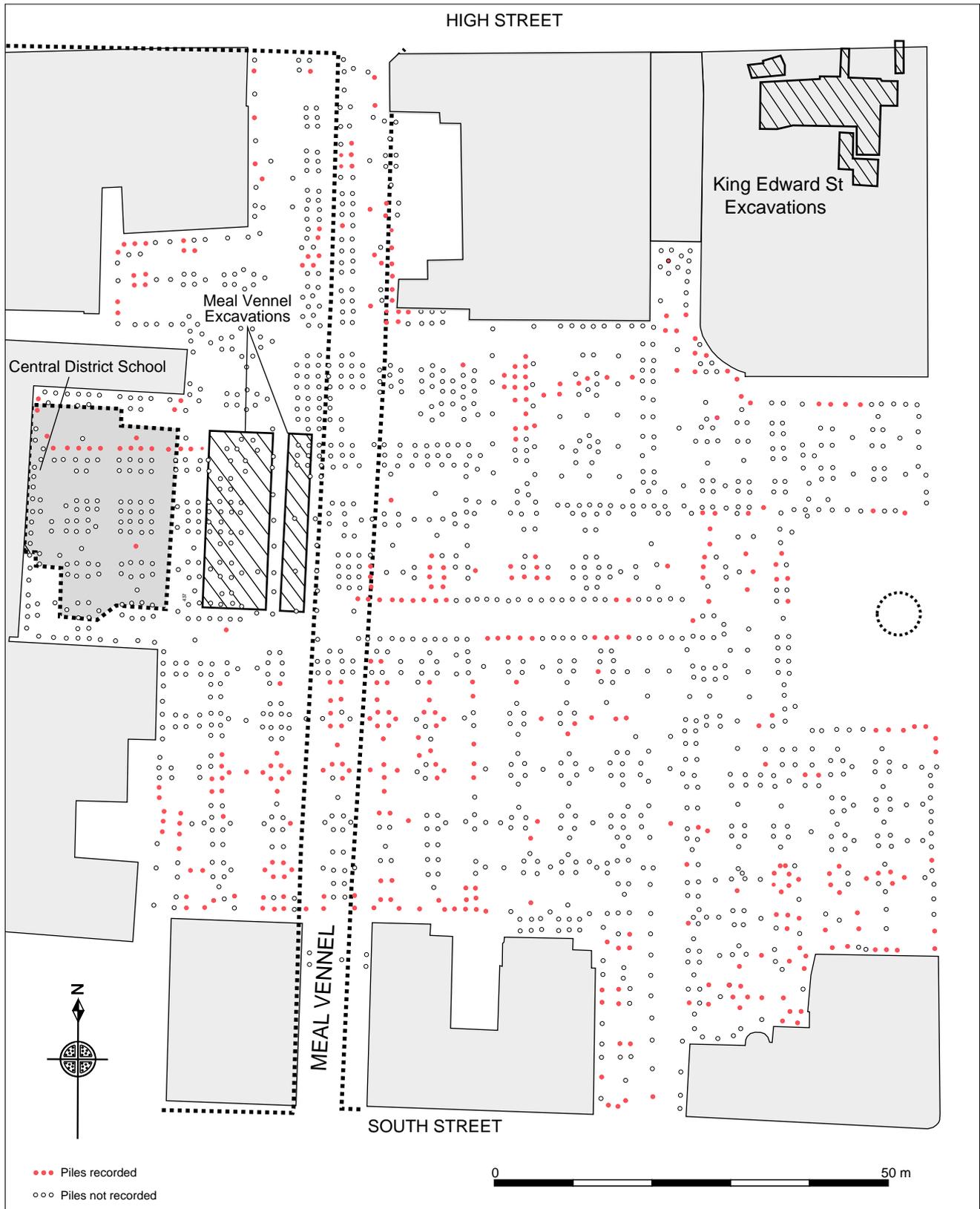


Figure 2: Site plan with monitored boreholes.

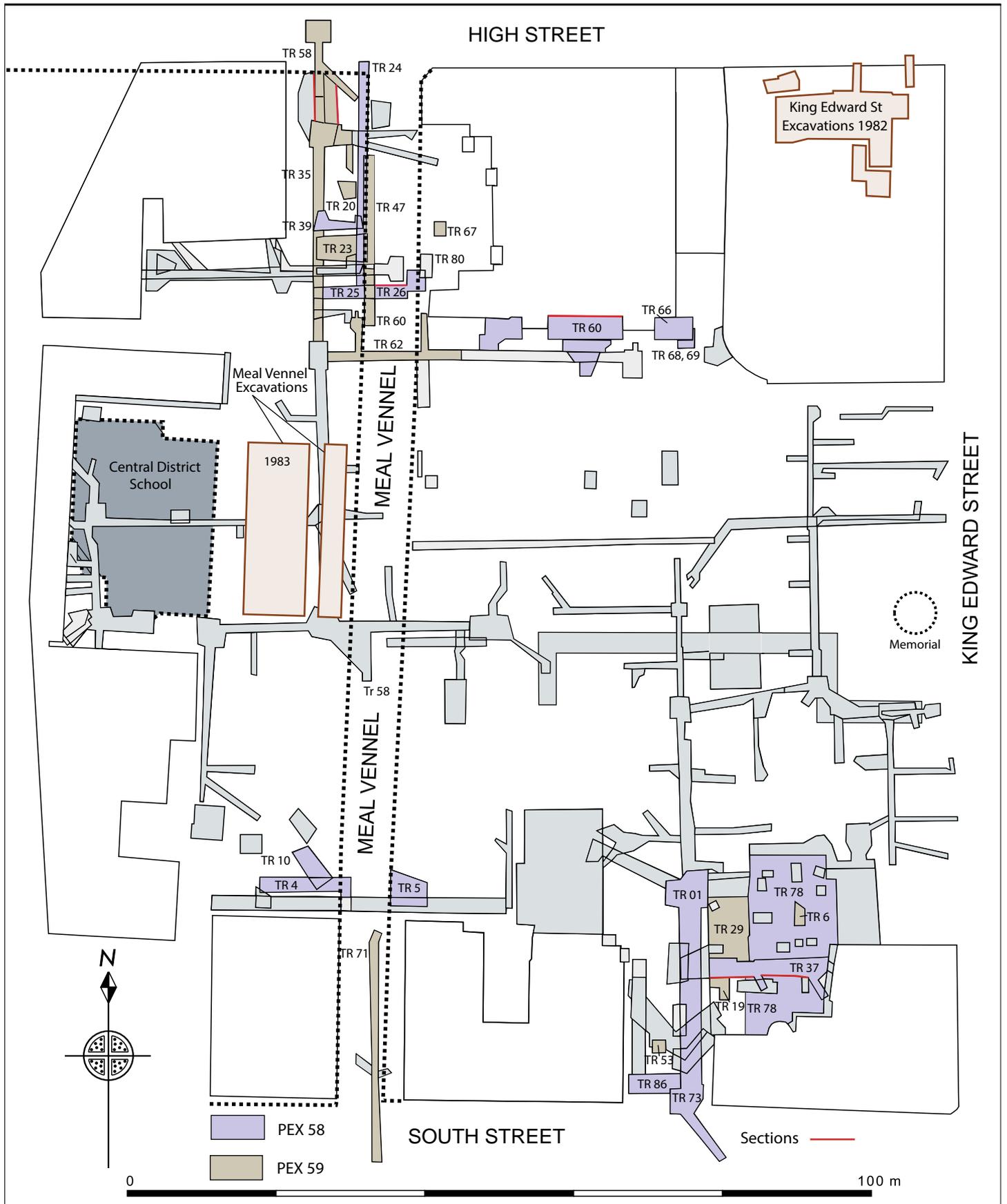


Figure 3: Site plan and trenches mentioned in the text.

Of the c. 1864 pile holes, only 389 (c. 21.6%) were recorded, due to the construction methods employed (see above). Monitoring of the pile holes, where possible, involved recording the approximate depths of deposits on the piling auger's gauge as it emerged out of the ground. The deposits could only be categorised as modern rubble, dark loose soil, black organic material, and natural clay or sand and gravel.

The natural sand and clay was generally recorded between 3 and 4 m below the existing ground surface. However, because of the difficulty and inaccuracy of recording the depths of soil deposits in the drilling work, due to the speed of mechanical boring, the evidence can only be considered useful for recording the presence or absence of middens.

In addition to the above, 186 trenches and manholes from 0.6 m to 3.7 m in depth, were recorded during the fieldwork. Some trenches were excavated by the developers in the south-east area of the site to lower the ground surface by up to 2 m. Trenches up to 4 m in depth were predominantly located to the SE and NW and the hand excavation of other trenches up to 6 m deep took place on the north side of the site beside British Home Stores (BHS).

When allowed by the developers, access to trenches over 1 m deep was undertaken for recording purposes, but this was restricted or made difficult: the bases of some trenches were already filled with gravel bedding or pipes, and shoring was erected in others. Cleaning of trench sides was also restricted by the need to limit the amount of spoil created, and the upper parts of deep trenches could not be recorded. However, these had generally been disturbed previously. Most trenches were less than 2 m deep, especially on the western and central parts of the site, and revealed little of archaeological interest. The most archaeologically productive areas were near the High Street, South Street and under BHS. Trenches were located on plans, described in note form, and their sections with the more interesting stratigraphy were recorded by measured sketches. The few trenches with significant remains were recorded by formal measured sections.

The trench and context numbering system

All watching briefs in Perth from 1978 were assigned a *PEX* code and sequential number by the Scottish Urban Archaeological Trust (SUAT) (Bowler 2004, Appendix 8). The two watching briefs on St John's Square trenches were assigned codes *PEX 58* and *PEX 59*. Contexts were given four-figure numbers. For the watching brief on the pile holes (*PEX 55*), the first number represented the area on the contractors' plans and the other three numbers represented the number of the pile e.g. Context 1001 is in Area 1, Pile 001. All finds from *PEX 55* are unstratified and do not form part of this publication.

For the two watching briefs on the trenches, *PEX 58* and *PEX 59*, the first two numbers represent the trench number, the last two numbers identify the context in that trench, for example *PEX 58, 2402* represents Trench 24, Context 02. Contexts ending '00' are unstratified. Generally, only those contexts from which finds were recovered were numbered. The numbering of contexts is therefore limited to trenches as stratigraphic links across the site could not be identified with any certainty.

Results of the Fieldwork

(Full details of the stratigraphy can be found in the site archive along with the field drawings)

High Street

Trench 58 (site code *PEX 59*) extended southwards from the High Street frontage on the west side of Meal Vennel, revealing a sequence of at least three buildings. The earliest was built directly on natural clay at c. 4.4 m OD. The buildings comprised three phases of wooden walls aligned lengthways to the front and rear, some 4.5-5 m apart. The front wall lay c. 2 m south from the present street frontage. Posts aligned E/W were visible in the east side of the trench (Figure 4) and were probably roof supports with stake and wattle hurdling between. The layers between the posts were generally alternating bands of brown or grey clay and organic material, presumably floor and occupation levels.

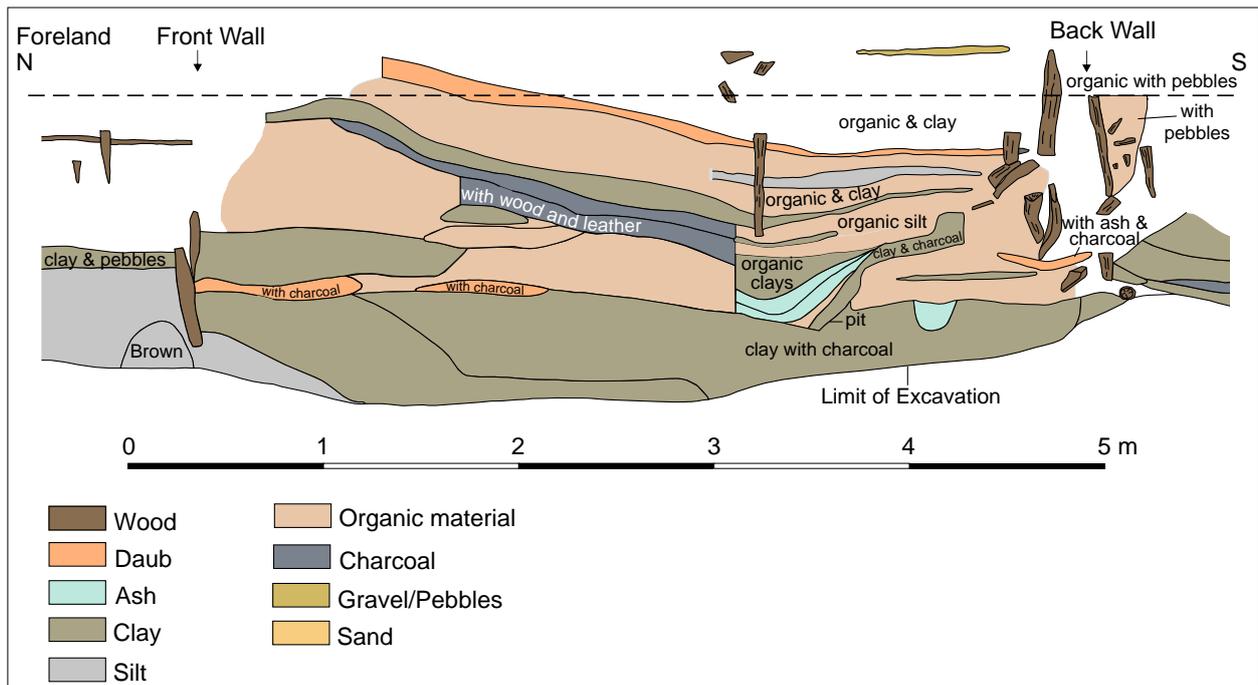


Figure 4: East section of Trench 58 (PEX 59).

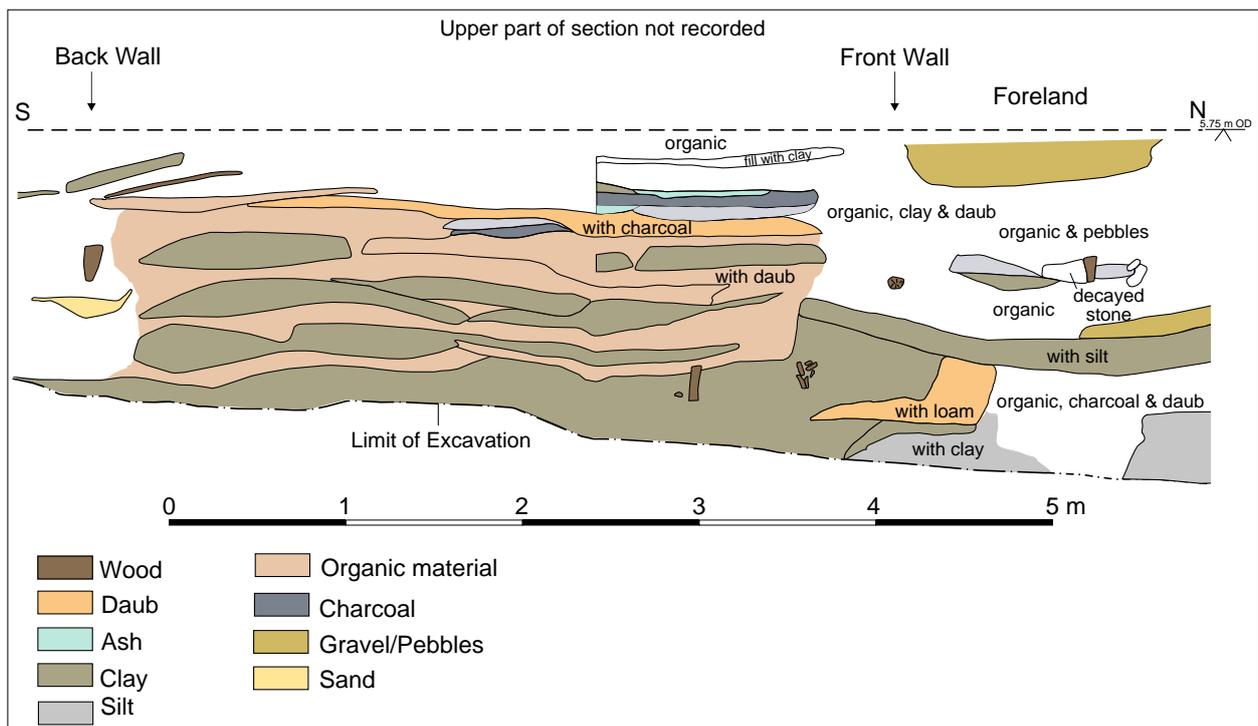


Figure 5: West section of Trench 58 (PEX 59).

Two charcoal layers and a layer of crushed daub or burnt clay from the hurdling were identified as destruction levels, indicating that all three building phases ended in fire. The lowest/earliest stakes at either end of the section were associated with blue clay, possibly the remains of wall cladding, with a layer of grey ash, charcoal and burnt daub between. The deposits of this earliest building were cut through by a pit, c. 0.5 m deep, lined with brown clay and filled with ash and organic deposits.

The west side of the trench (Figure 5) contained a layer of horizontal wattle, measuring 0.8 m N/S and at least 1.25 m E/W, which has been interpreted as a hurdle at a doorway, similar to others found previously in Perth (see Murray 2010, 132-4). The wattle hurdle belonged to the latest building phase.

Evidence of a wider surface to the High Street was revealed in trenches 24 (PEX 58) and 58 (PEX 59). The north end of Trench 24 revealed

a sequence of 16 gravel deposits 1.49 m deep, varying from 70 mm to 0.23 m in thickness. The gravels extended 2 m south along the west side of the trench. They probably represent either successive surfaces, or more likely, forelands for displaying goods for sale in front of buildings on the south side of the High Street.

In the west side of Trench 58 (Figure 5), to the north of the frontage buildings were two gravel deposits 0.12 m to c. 0.25 m thick, separated by brown organic deposits 0.85 m thick, which represented a foreland. Some 0.50 m above them was a horizontal wattle fence, 0.8 m across, with one, possibly two, stakes driven through it (not visible on Figure 5). This was probably a hurdle in front of a building on the street frontage (see Perry 2010, 46, illus 38). Dug into the natural clay at the base of the west side of the trench was a pit, 0.85 m across and over 0.4 m deep, filled with organic material, charcoal and daub. A second, later pit was dug to the south, measuring 1 m across and 0.38 m deep. It was filled with brown loam and daub.

Meal Vennel

There was scant evidence of the remains of earlier metalled road surfaces beneath the present road surface of Meal Vennel. The west frontage of the street was identified by the four surviving courses of the lower part of a stone wall, 0.75 m wide and 0.7 m high in Trench 26 (PEX 58) (Figure 6). A layer of gravel, 0.7 m wide and 80 mm thick, was visible to the east of this wall, beneath which were decayed sandstone fragments but neither of these was considered broad enough to be previous surfaces of Meal Vennel. The other layers in the trench were clays, silts and organic deposits, with some structural timbers. These suggest that either Meal Vennel was a later insertion into the existing street pattern of Perth or that the alignment of the vennel had changed. It is dated from at least the sixteenth century, but may originally have been the western boundary of early medieval Perth (Bowler 2004, 29).

The centre and south end of Meal Vennel revealed no further evidence of metalled road surfaces below the existing street level (Plate 4). Although in the centre of the vennel in Trench 58 (PEX 58) there were two sand surfaces c. 0.8 m below the ground surface, at a height of about 6 m OD. Evidence of the south end of Meal Vennel, at its

junction with South Street survived in Trench 71 (PEX 59), below over a metre of modern rubble. There were six layers of alternating grey-brown loams and orange-brown clays, varying from 10-110 mm in thickness, interpreted as possibly floor and occupation levels of buildings or yards. Traces of wattle were noted at the base of the trench beneath these levels.



Plate 4: Trench 71 (PEX 59), West section under Meal Vennel, facing north.

Some further evidence of gravel surfaces below Meal Vennel was recorded in the west side of Trench 5 (PEX 58). A 0.38 m thick gravel layer in grey sand extended from the north end of the trench to about half way down its west side. Above that, and extending the length of the west side, was a layer of fine gravel in black organic material, up to 0.26 m thick. Metal slag was noted in this material and in a layer of light brown sand above. This was possibly waste material from metalworking activities known to have taken place in Meal Vennel (see below), but it is not clear if these gravels were earlier surfaces of Meal Vennel or of backland paths behind South Street.

It is possible that the alignment of the vennel had moved eastwards. Trenches 24 (PEX 58), 47 (PEX 59) and 62 (PEX 59) at the northern end of the site and to the west of the former western frontage, revealed two gravel layers within organic deposits extending southwards from High Street for over 40 m. Trench 62 provided a section across them, establishing their widths as 1.5 m and 2.3 m and their thicknesses between 6 mm and 0.36 m. The layers of gravel were not level but had slumped in the centre as much as 0.50-0.80 m, presumably into underlying pits or trenches.

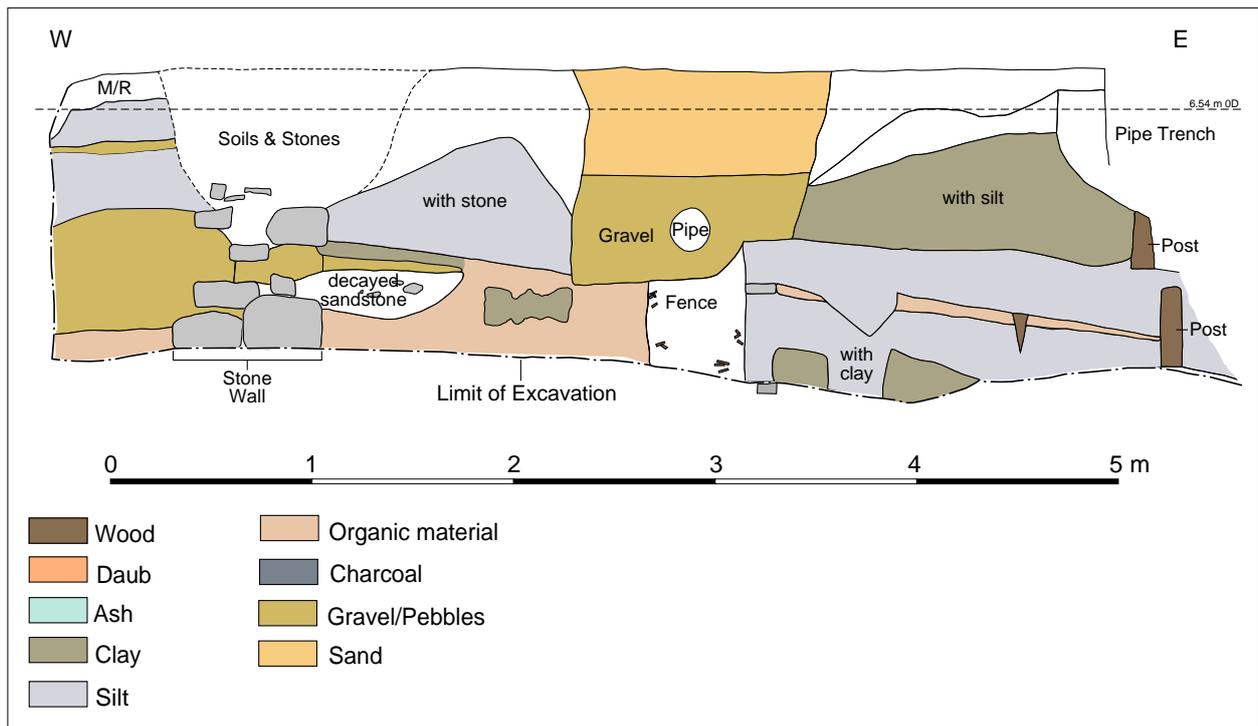


Figure 6: North section of Trench 26 (PEX 58).

The presence of structural timbers in Trench 24 (PEX 58) under Meal Vennel confirms the suggestion that the street was not an original part of the town plan of Perth, at least in its final alignment. Beneath two layers of gravel, the ends of two parallel squared oak timbers were visible in the east side of the trench. Both timbers were located some 1.7 m below the ground surface, and measured c. 0.28 m in width and 0.15 m in thickness, with the northernmost one resting on a large stone (Plate 5). Although grooves were not visible in the upper surfaces of these timbers they may have still functioned as sill beams for the walls of a building. If they represented a building, it is not clear whether it would have fronted onto an earlier version of Meal Vennel or onto a path in the backland behind the High Street frontage.



Plate 5: Trench 24 (PEX 58), East Section, horizontal timber above stone, facing north.

The west side of Trench 24 (PEX 58) also contained several timbers, forming two groups, within organic deposits. The first group, the lowest, comprised four oak posts, which were positioned 0.40 m to 3.75 m apart, with a horizontal oak timber and a smaller post positioned between the two southernmost. It is not clear if these uprights were roof timbers for a building or part of a boundary fence, but their location within the frontage area suggests a building.

The second group of timbers was associated with a horizontal timber, 5 m long, which was cut at one end and damaged by machining at the other (Plate 6). An upright post was located 0.3 m from its southern end with another two oak posts to its north. There was no groove for planks on the upper surface of the horizontal timber, nor was there any sign of stakeholes for a stake and wattle fence. It is, therefore, unlikely that the timber was a sill beam of a building. It may, instead, have been a kerb alongside the edge of the upper gravel recorded in the east side of the trench, similar to a wooden kerb found alongside a path (P1) at the Marks and Spencer site on the High Street in Perth (PHSAE) (Blanchard 1978; Perry 2010, 79).

Apart from the former west frontage wall (see above), there was little evidence of any structures fronting Meal Vennel. Isolated timbers

(wattle fences and posts) were found in various trenches but formed no pattern. The north side of Trench 23 (PEX 58) contained possible clay and sand surfaces 40 mm thick, within organic deposits and garden soils. There were also two slag deposits, presumably associated with the metalworking known to have taken place at five smithy booths on the west side of Meal Vennel in the sixteenth and seventeenth centuries (Milne 1891, 153; Sermon and Cox 1996).



Plate 6: Trench 24 (PEX 58), West section showing horizontal timber, facing south-west.

Only one of the timbers was identified as a sill beam with a groove in its upper surface. This timber, aligned N/S in the south side of Trench 26 (PEX 58), lay adjacent to the foundation trench for the west wall of BHS, at a depth of 1.5 m below the street level. It measured 110 mm across and partially rested on a large stone. Together they may represent a pad stone for a timber sill beam of a building on the east side of Meal Vennel. The groove in the sill beam indicates a plank wall construction (for a similar example see Perry 2010, 72, illus 79). Beneath the beam was an upright post with a horizontal piece of wood on its east side, possibly the remains of a stake and wattle wall of an earlier timber building. The sill beam and wattling, together with the modern foundations for BHS, suggest a continuity of property boundaries between the medieval period and the present day. It is likely that Meal Vennel may have been formed to provide a public thoroughfare between High Street and South Street.

South Street

Just as there was no trace of road metalling below Meal Vennel, so there was no certain trace of metalling below South Street in the two trenches there, and little trace of buildings on its frontage.

The stratigraphy at the bottom of Trench 73 (PEX 58) consisted of a natural deposit of green clay at 3.62 m OD, above which was a c. 0.30 m thick organic deposit. A layer of stones 0.13 m deep, which is the only evidence of a previous road surface, rested on the organic material. Above the stones was a mixed layer of green sandstone fragments 0.87 m in thickness. However, it is not clear if these represent road surfaces or building demolition, or both. Between the upper stones and a 0.20 m thick layer of peat and wattle, was a 0.28 m depth of organic silt. The wattle may have been a hurdle laid down as a surface and similar to a twelfth-century example, used to form a pathway at the Marks and Spencer site (PHSAE) (Perry 2010, 46, illus 38). However, there was no sign of a foreland in front of the South Street frontage similar to that observed on the High Street.

The bottom 1.14 m of a manhole at the southern end of Trench 1 (PEX 58), under the pavement of South Street, comprised natural flood deposits of sandy clays and a thin black organic lens. Above them, were three deposits of clayey sand, 0.45 m thick, with a thin lens of possible straw. It is not clear if these were natural deposits or of human deposition. Definite archaeological deposits began 2.38 m below the pavement level comprising from the bottom up: sandy loam, organic sandy loam with abundant twigs/rootlets, pale sand with frequent patches of sandy loam and some sandstone rubble and finally peat with frequent pebbles, stone fragments and organic matter. This latter layer may have been midden material discarded onto the street.

The absence of a surface relating to South Street may simply be because it was unsurfaced, or because the medieval street surface was narrower than the present one. More of a problem, however, is the presence of stake and wattle fences extending into South Street. Underneath Meal Vennel, in the west side of Trench 71 (PEX 59), beyond the South Street frontage, were traces of two stake and wattle fences on a N/S alignment. The lower one in the base of the trench comprised a single sloping stake, 50 mm wide by 0.31 m high, with a piece of wattle adjacent to its top. Some 0.3 m above this stake was another slightly thinner one with three rows of wattle extending for a length of 0.76 m on a N/S

alignment. Between these two fences was a thick organic layer. The fences suggest that the north frontage of South Street was moved northwards to allow widening of the street, possibly in the seventeenth or eighteenth century.

In the south side of Trench 86 (PEX 58) within black-grey clay was a wooden stake, possibly part of a stake and wattle fence on N/S alignment, 2.19 m below the ground surface. The feature may have been a boundary, as there was a distinction in the layers to the east (mixed clay with organic patches) and west (dark silt and sandy loam). The eastern layer was slumped into a pit or ditch.

Backlands

Most of the trenches were in the former backlands of the High Street or South Street properties where much of the area had been used for the deposition of organic waste materials, forming middens. In many trenches above these deposits there were garden soils with little visible organic content. The interpretation of these soils at the time of excavation is that they represented an attempt by the burgh authorities to improve the general environment and sanitation of the burgh during the later medieval period by restricting the laying down of middens, but this may not be the case (see Discussion, below). In 1504 a burgh official, the 'pynor', was responsible for cleansing the streets '*as use and consuetude has been in tymes bygane*' (Stavert 1993, 446). Sand and clay surfaces were also observed in several trenches and while some may have been within buildings, others were probably external yard surfaces. Within the backlands there were also areas of burning and hearths. Whether the latter were within buildings or not, could not be ascertained.

Several of the timber features recorded within the backlands may have belonged to structures, but only one definite backland building could be identified, under the south-east corner of BHS in Trenches 68 and 69 (PEX 58). A floor of light sandy clay was bounded to the south and east by stake and wattle fences on N/S and E/W alignments. The former alignment consisted of seven rows of 10-30 mm diameter wattle forming a fence. The two fences probably formed the corner of a building, although the actual corner was removed by machine. In the north side of Trench 69, within the clay floor, was an area of

charcoal 50 mm thick measuring 0.7 m across identified under mixed clay some 1.3 m from the east wall. Although rather small for a hearth, it may have been the site of a brazier. The building was situated c. 30 m back from High Street.

The probable remains of a second backland building were noted in the south side of the same trench. This was a squared, horizontal oak timber, 0.15 m wide and 0.12 m thick, on a N/S alignment. Five courses of wattle, with an overall height of 0.12 m, were recorded above the timber, which was probably a sill beam for a stake and wattle fence, and formed the wall of a timber building. A patch of clay on the east side of the wattle was possibly daub from the fence.

On the southern side of the site, behind the South Street frontage was another possible backland building. In the south section of Trench 37 (PEX 58), some 2.5 m from its west end, were two wattle fences, on a N/S alignment. A horizontal timber 80 mm wide and 0.12 m thick underlay the easternmost or outer of the two fences. Two vertical posts surviving up to 0.20 m in height, stood 70 mm apart on the east side of the timber. The remains of a smaller post or stake were visible between and underneath these posts. It is not clear how many phases are represented by the wattle fences and various timbers but it is possible that the fences represent a double wall of a building, with green clay floors and banded organic and black silt occupation levels (Plate 7), including a hearth to the west, and two or three gravel paths 1.8 m wide, to the east. The gravel paths were disturbed and may have been cut by a later pit. There was no evidence for a fence on the east side of the paths, although mixed organic silts indicate that there was once a boundary.



Plate 7: Trench 37 (PEX 58), South section, western part, facing south.

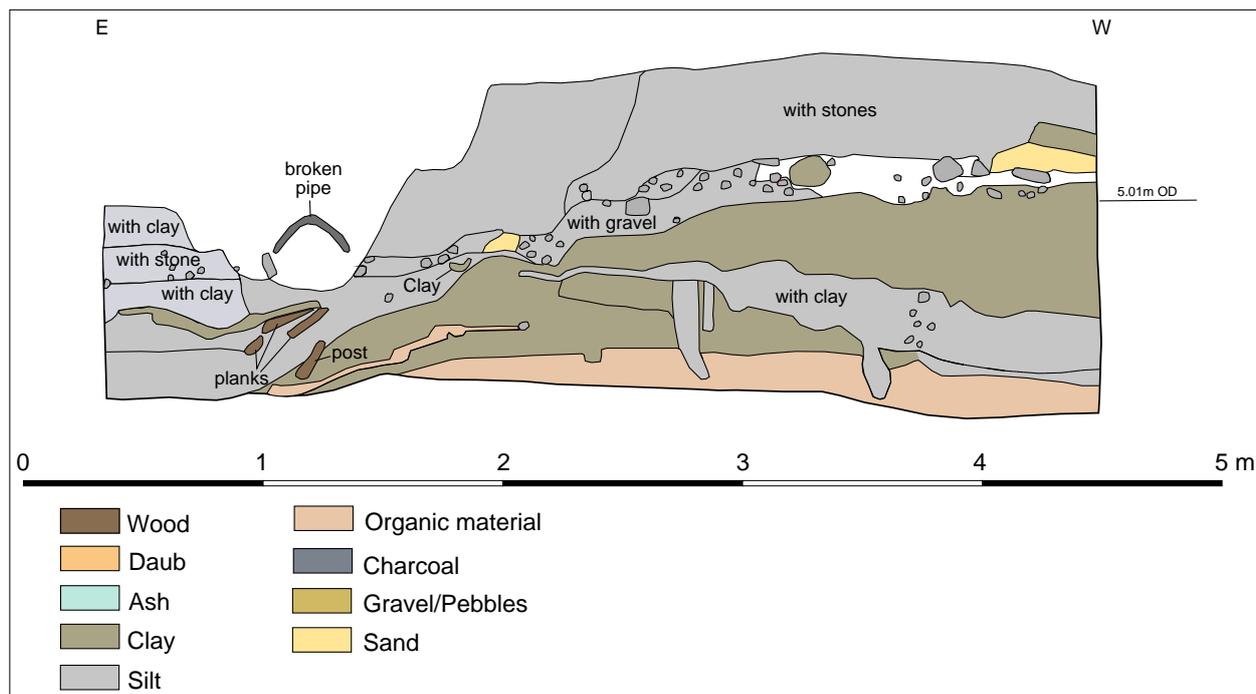


Figure 7: South section of Trench 37 (PEX 58), eastern part.

Approximately 12 m from the west end of Trench 37, and also on its south side were three horizontal or sloping oak planks, with a sloping post 0.19 m high beneath a sewer pipe (Figure 7). Their purpose is unclear, but the post may be a boundary, as it appears to have been hammered through the east end of a bank of light grey clay. This was interpreted as either a floor or a yard surface in which were visible three post- or stakeholes, 30-100 mm across and up to 0.43 m deep with traces of mortar in their fills. A possible courtyard surface of gravel and stony silt, some 4.2 m long, was recorded above both these features.

In addition to buildings, middens, gardens and hearths, there were also several pits in the backlands. Most of them were found during the underpinning works for BHS, where 13 were recorded. The purpose of most of the pits is unknown, but some may be interpreted as cess pits with organic fills. However, one pit, in Trench 51 (PEX 58), contained metalworking debris (Figure 8), and may have been associated with the metalworking in Meal Vennel (Sermon and Cox 1996). Of these pits, one contained a stake down its side, possibly the remains of a wooden lining and an iron knife with a wooden handle (Cat.5, see Artefacts, below). A second pit, with a stakehole at the base of its side, may also have had a wooden lining. Two other pits were lined

with clay and charcoal respectively (Figure 8).

Access to these backland areas was provided by paths, although it is not clear if these paths were private (within a property) or communal (between properties). Most paths were only visible as isolated lenses of gravel in the sides of service trenches (Figure 8), but to the west of Meal Vennel, more consistent remains were recorded near the High Street frontage. In several trenches two successive gravel layers, extending for about 20 m on a N/S alignment, were recorded. They were separated by a dark organic deposit up to 0.40 m thick. A third layer of gravel was noted in the west side of Trench 20 (PEX 59), probably a localised resurfacing over a sunken area. In the east side of Trench 35 (PEX 59) the gravels were visible for a length of 9 m. The lower gravel sealed an organic layer within which two stake and wattle fences (an upper and a lower) were visible that may have been contemporary. The organic layer also contained a decayed orange-grey stone, 0.63 m by 40 mm, interpreted as a possible hearthstone. The upper gravel was sealed beneath another organic deposit but it too contained another possible hearth area measuring 0.7 m by 10 mm comprising clay with decayed sandstone and cobbles, and a floor or surface of clay, silt and sand. The hearths may have been external workplaces or for burning rubbish rather than domestic hearths.

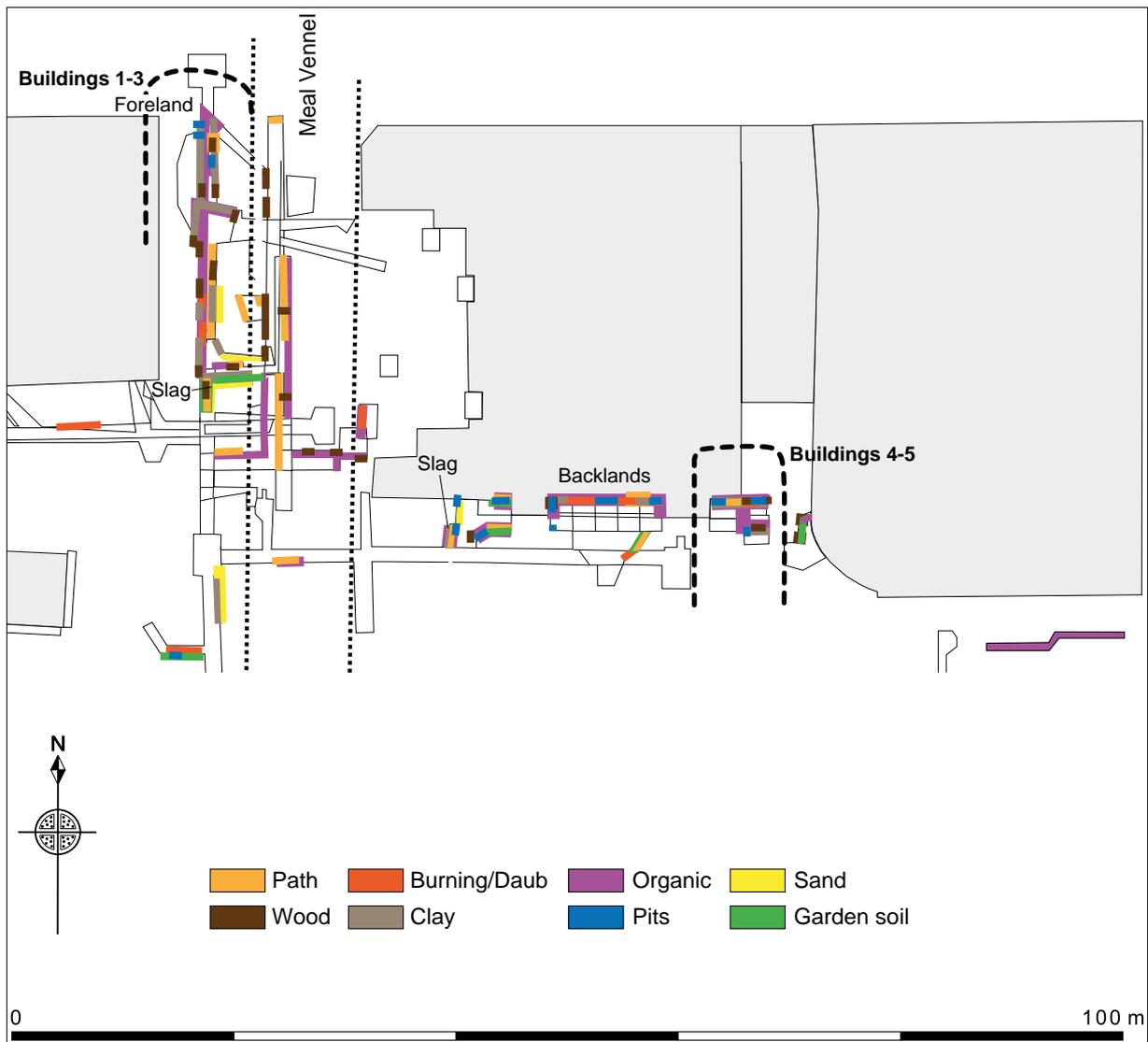


Figure 8: Northern part of the site with trench evidence.

Evidence for three paths extending behind buildings on the High Street was recorded during the underpinning works beneath BHS (Figure 8). The easternmost path under the SE corner of BHS consisted of grey-green sandy-clay, which was bound on its west side by two wattle fences 0.10 m apart on N/S alignments. The western fence comprised 19 rows of wattle, 0.20 m high and the eastern fence comprised six rows of wattle, 0.10 m high. Beside each fence was a single stake, 50 mm in diameter by the western fence, and 40 mm by the eastern fence. Together these were probably a boundary separating middens in adjacent properties.

In the north side of Trench 60 (PEX 58), near its east end, were two gravel deposits 0.90-0.98 m wide, the lower one lay directly on natural clay. These were mirrored on the south side of

the trench, where three layers of gravel were recorded. Above the upper gravel was a layer of garden soil up to 0.65 m thick on which a possible hearth of burnt clay and sand with charcoal, some 2 m across rested.

The westernmost path was recorded in both the north and south sides of Trench 70 (PEX 58). In the south side the gravel survived 1.9 m in width but it was truncated in the north side. It is not clear if this was a path or even a courtyard behind Meal Vennel or High Street. The west side of Trench 51 (PEX 58) contained a 40 mm thick surface of sandstone slabs sandwiched between peaty silts, which continued to the south as a layer of grey clay. The surface, interpreted as a courtyard was truncated to the north by a pit, measuring 1.3 m in diameter and 1.5 m deep.

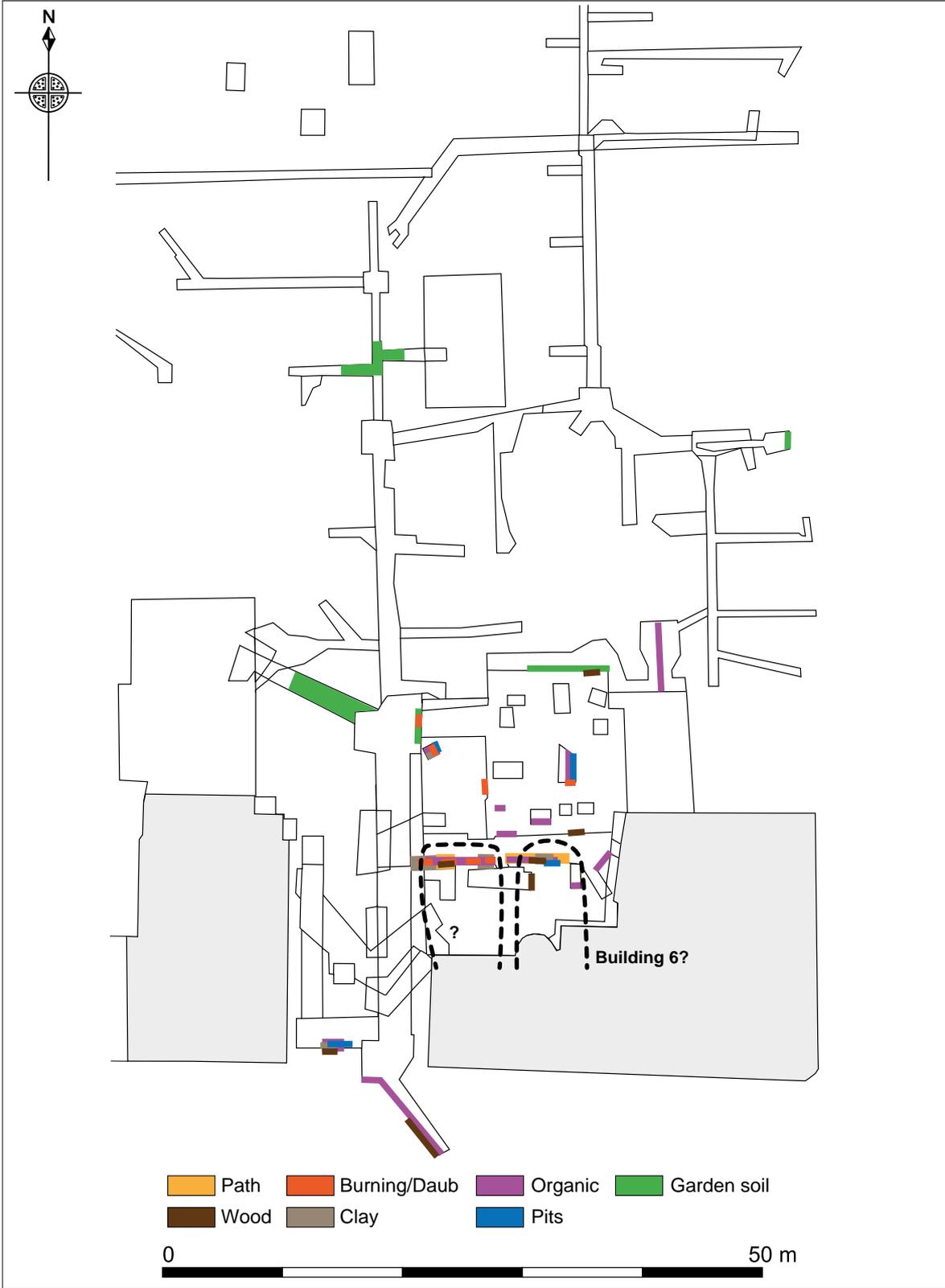


Figure 9: Central/south-east part of the site with trench evidence.

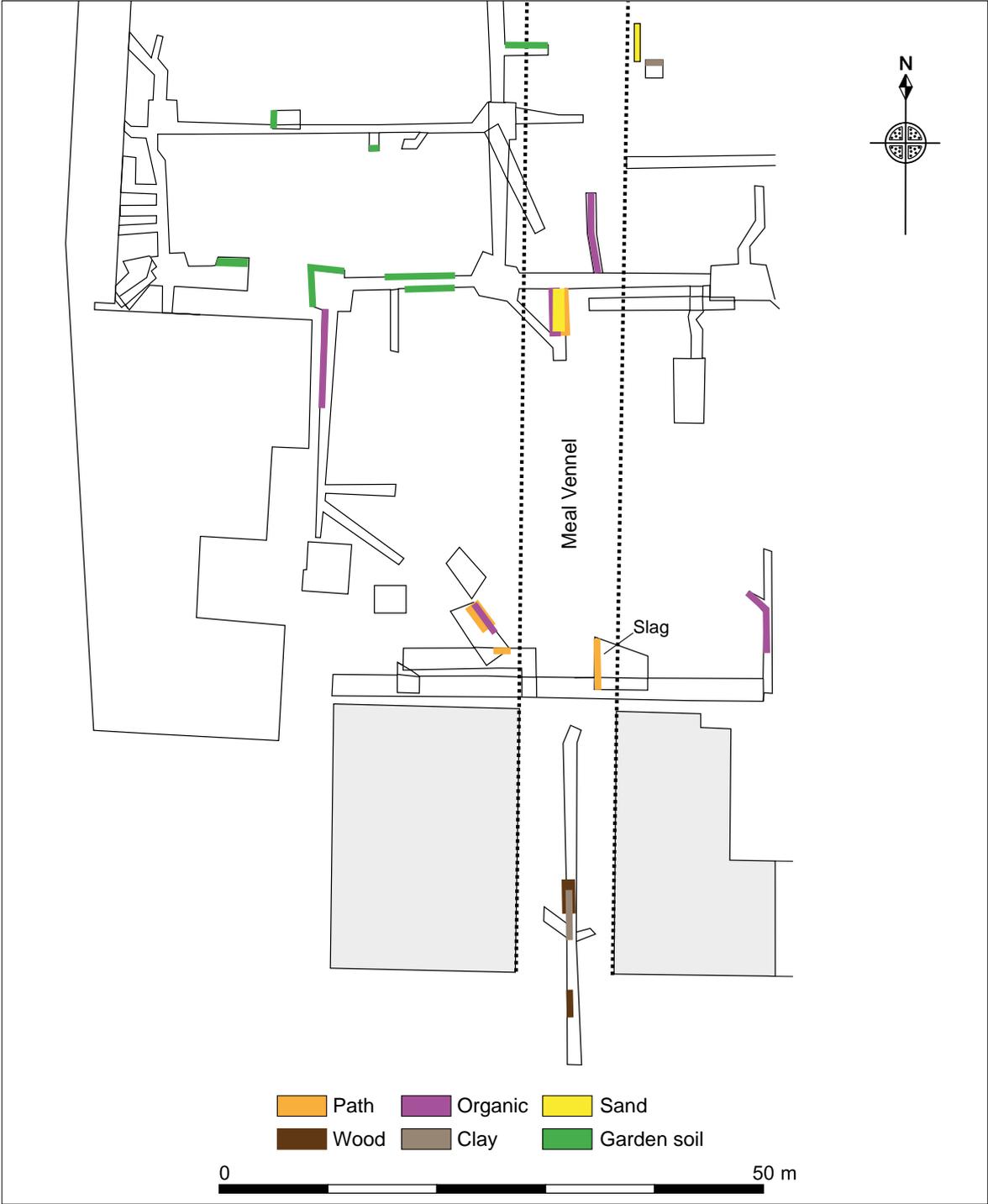


Figure 10: Central/south-west part of the site with trench evidence.

Discussion

Organic material in piling holes

The difficulties encountered in monitoring the pile holes are outlined above. Interpretation of the evidence is therefore limited to the presence or absence of organic material or midden deposits. Of the 389 piles monitored by the archaeologists, this material (often foul-smelling and peaty in texture) was noted in 245 piles (Figure 2). The use of backlands for the dumping of organic material forming middens can be compared with sites excavated elsewhere in Perth, such as 75-77 High Street (PHSAE), Scott Street and behind the frontages at King Edward Street and 80-86 High Street (Coleman 2004a, 299-304). Their presence under the course of Meal Vennel is noteworthy, indicating that this street may have been a later insertion into the backlands of High Street and South Street properties. It should, however, be noted that midden deposits have been found in other watching briefs on service trenches under the roadways of both High Street and South Street. These deposits, generally in the form of brown/black midden or brown clay were even noted under the former Central District School at Meal Vennel, despite its having a basement. The presence of organic/midden deposits under Meal Vennel as revealed by the watching brief contrasts with the evidence from the 1983 excavations there, where a sequence of industrial activities and features, but no middens, were recorded (Sermon and Cox 1996).

Evidence from the trenches

Interpretation of the evidence from the 184 services and construction trenches, which were monitored in the watching brief, is naturally biased towards the deepest trenches. The deep trenches on the western side of the BHS building produced no interesting deposits or features, although two almost complete post-medieval stoneware jugs were recovered by the workmen from Trench 67 (PEX 59) (Cat.46 and 47).

The evidence (Figure 8-10) highlights the occurrence of timbers, surfaces/floors and hearths/burning near High Street and under BHS, with a lesser concentration behind South Street

near the SW corner of the site. These are the areas where archaeological features would have been expected, situated on or close to the street frontages. The absence of such features from the central part of the site reflects the shallow depth of most of the trenches there. The presence of organic/midden deposits and garden soil does not mean that structures were not present. In trenches where there were structures there were a number of gravel deposits (paths). A possible 'foreland', in front of one structure, was noted on the High Street frontage, and at least two paths, one with a wooden kerb, and a possible early alignment of Meal Vennel were noted extending southwards from High Street. Three paths were noted under BHS, as well as a possible sandstone surface. Four paths were recorded behind the South Street frontage, including a possible early version of Meal Vennel itself. Thirteen pits (Figure 8) were noted under BHS, including two which may have been wood-lined, one which may have been lined with charcoal, and one with clay.

The nature of the watching briefs precluded any more detailed interpretation of the site and limited the identification of features, which can be paralleled elsewhere in Perth. In particular, it was not possible to date any of the features found on the site, although the three successive timber buildings on the High Street frontage could be thirteenth or fourteenth century in date by association.

The Artefacts

By Adrian Cox *unless otherwise stated*

The Pottery

By Derek W Hall

Introduction

The watching briefs on the construction of the St John's Square shopping centre produced a pottery assemblage of 728 sherds ranging in date from the medieval through to the early modern period (Appendix, Table 1). All the fabrics have been identified by eye and no petrological analysis has been undertaken. They are discussed below in their various categories. The details of the illustrated pottery can be found in Table 2.

Figure 11: Illustrated sherds				
Scottish Redware	PEX	Trench	Context	
1	55	u/s	-	Rim sherd from jug glazed green-brown with internal lid seating.
2	58	34	1	Rim and ribbed strap handle from jug externally glazed dark green.
3	59	38	u/s	Rim and strap handle junction from green glazed jug.
4	59	38	u/s	Rim and ribbed strap handle from green glazed jug.
5	59	58	u/s	Rim sherd with pulled spout and strap handle junction from jug glazed brown.
6	58	68	19	Rim sherd and strap handle junction from jug glazed green brown.
7	59	59	u/s	Rim sherd and complete rod handle from jug with splash of green brown glaze.
8	59	65	u/s	Rim sherd with applied facemask and arm from green glazed jug.
9	59	20	u/s	Rim sherd from small vessel slipped white internally and externally.
10	58	24	2	Complete strap handle from green glazed jug.
11	59	74	u/s	Strap handle junction from jug with traces of white slip.
12	58	1	u/s	Narrow strap handle from vessel with traces of green glaze.
13	58	64	u/s	Fragment of twisted rod handle glazed green brown.
Scottish Redware	PEX	Trench	Context	
14	58	24	u/s	Body sherd from green glazed jug decorated with applied pads glazed brown.
15	58	24	02	Body sherd from green glazed jug with applied pad with incised vertical lines.
16	58	24	02	Body sherds from green glazed jug with traces of applied stamp or seal.
17	59	20	u/s	Rim sherd from cooking pot with internal white slip and external smoke blackening.
18	59	39	u/s	Rim sherd from cooking pot with external smoke blackening.
19	58	34	1	Rim and sidewalls from cooking pot with internal and external smoke blackening.
20	59	59	u/s	Slightly thumbled basal angle and sidewalls from cooking pot with external and internal smoke blackening.
Figure 12: Illustrated Sherds				
Scottish Redware				
21	58	60	u/s	Rim sherd from jar slipped white internally and externally.
22	59	38	u/s	Handle junction and rim from dripping pan internally glazed green.
23	58	02	u/s	Handle junction from skillet or ladle externally glazed green.
Scottish White Gritty ware				
24	59	20	01	Rim sherd from unglazed vessel.
25	59	71	u/s	Rim sherd from jug with traces of external yellow glaze.
26	59	71	u/s	Rim sherd from unglazed jug with pinched spout.
27	59	30	u/s	Rim sherd and handle junction from unglazed jug.
28	58	24	50	Rim sherd and small tubular spout from green glazed vessel.
29	59	62	u/s	Tubular spout from jug glazed speckled green.
30	58	60	u/s	Ribbed strap handle from jug with patches of green glaze.
31	58	26	26	Twisted handle from jug glaze speckled green.
32	58	38	u/s	Basal angle and sidewall from jug in very highly fired fabric with spots of brown glaze.
33	58	34	01	Rim sherd from unglazed jar.
34	59	35	u/s	Rim sherd from cooking pot with internal and external smoke blackening.
Yorkshire Type ware				
35	58	24	91	Strap handle from jug glazed lustrous green.
36	59	18	u/s	Small rod handle junction from vessel glazed lustrous green.
37	58	23	u/s	Small rod handle junction from vessel glazed green brown.
38	59	59	u/s	Tubular spout with remains of applied twisted decoration glazed lustrous green.

Scottish Redware	PEX	Trench	Context	
39	58	02	u/s	Beard fragment from facemask jug glazed lustrous green.
40	58	24	02	Knight with shield from 'knight jug' glazed lustrous green.
42	58	19	u/s	Strap handle fragment from jug glazed speckled green.
Figure 13: Illustrated sherds				
Low Countries Redware				
41	59	39	u/s	Rod handle fragment with spots of brown glaze.
Unidentified				
43 (Yorks?)	58	69	u/s	Rim sherd with bridge spout from jug splash glazed green.
44 (Yorks?)	59	19	u/s	Rim sherd from vessel glazed lustrous light green brown.
45 (Yorks?)	59	59	u/s	Base sherd from jug with 'knifed' frilling.
Stoneware				
46	59	67	u/s	Virtually complete jug glazed yellow brown with small rod handle and the number '4' incised below the rim.
47	59	67	u/s	Virtually complete jug glazed brown with 'A Frasier Dundee' stamped on its side.

Table 2: Figures 11-13, illustrated pottery.

Scottish Redware

This fabric type (Figures 11 and 12) has been identified from more than 35 years of archaeological excavations in the Scottish east coast burghs where it forms a tradition of native pottery production apparently dating from the thirteenth to the fifteenth centuries (Hall 1996, 126). The main centre of medieval production of this pottery was thought to be Stenhouse, Forth Valley (Hall and Hunter 1992). However, recent work on chemical sourcing of this pottery from the medieval into the post-medieval period indicates that production of it was complicated, but that it was probably centred in the vicinity of many of the burghs (Haggarty et al. 2011). Kiln furniture recovered from the Horsecross (Hall 2007, 152, 157) and new Council offices excavations in Perth (unpublished) suggest that there may be kilns on the north side of the burgh.

At St John's Square it forms the largest fabric group present, numbering 457 sherds or c. 62% of the assemblage. It came from 83% of the trenches that produced pottery indicating it was widespread across the site. Glazed jugs are the most common vessel represented in this fabric with a particularly fine fragment of beard and facemask from a figure jug (Cat.8) (Figure 11). Amongst the other vessel forms are 28 jars used for cooking, six open bowls, one skillet and one possible storage jar.

Scottish White Gritty ware

This ware (Figure 12, Cat.24-34) is the second most common fabric in the assemblage accounting for 118 sherds, found across c. 46% percent of the trenches. The sherds largely represented handled jugs, with the occasional jar or pot. White Gritty ware has been found in Perth in association with twelfth-century fabrics, but it may have ceased to be produced by the fifteenth century. It also appears to pre-date the Redware industry. Over the last couple of decades research has identified three potential production centres for this fabric in Lothian, Borders and Fife regions (Haggarty 1984; Hall 1997). However, chemical sourcing of elements in the clay is beginning to suggest that kilns producing this fabric may have been more widespread than had previously been thought (Jones et al. 2006). It is most commonly highly fired to a white or grey colour and contains quartz inclusions. Vessels identified from the sherds include jugs, a jar and a cooking pot.

Scottish Post Medieval Reduced Ware

There are only two sherds of this fabric in this assemblage, found in two separate trenches. It was first identified as a specific type in excavations at Stirling Castle in the late 1970s (Haggarty 1980). It represents a late medieval transition from the Scottish Redware tradition and dates from the mid-fifteenth to mid-eighteenth centuries. On St Johns Square this pottery was relatively rare.

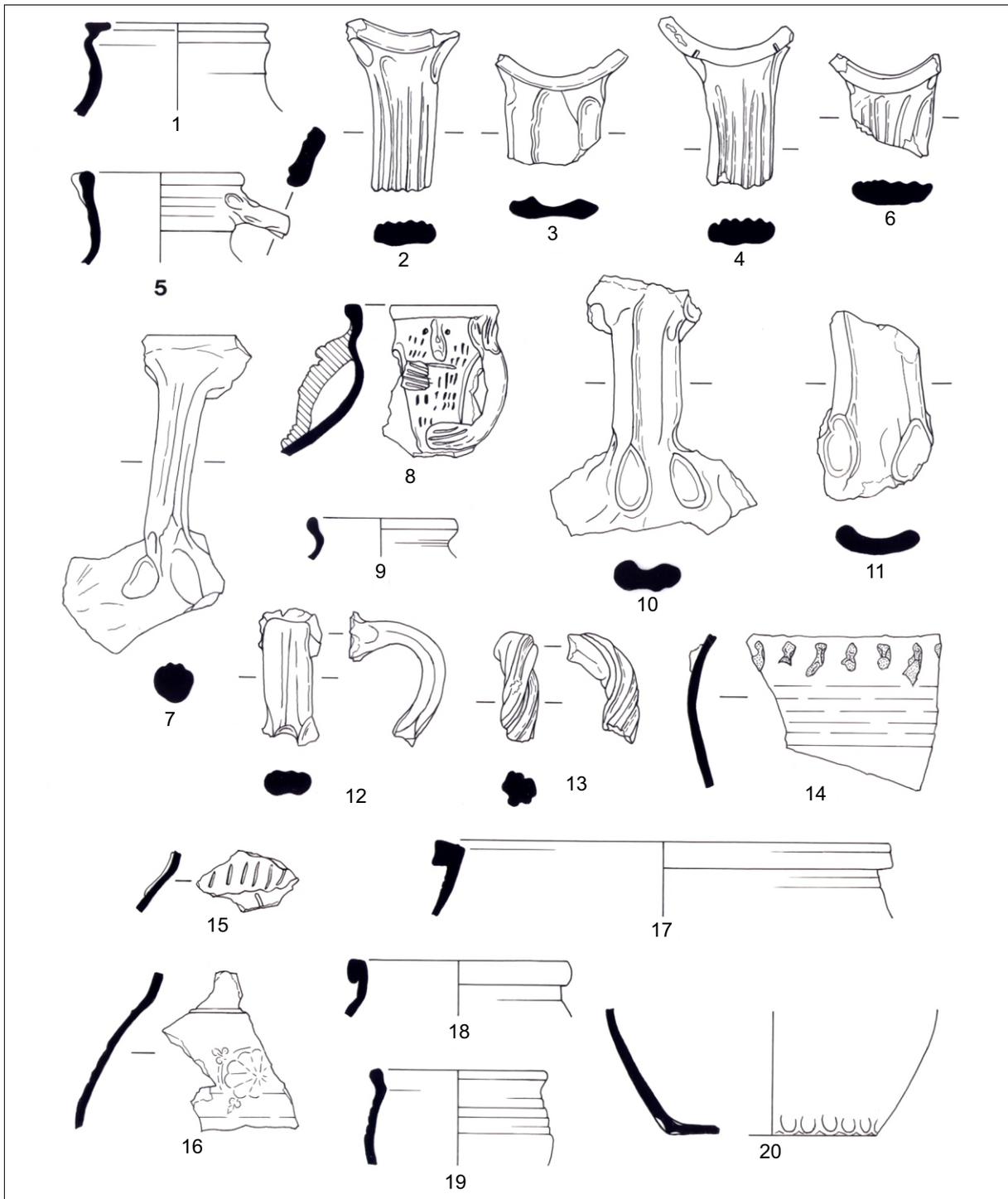


Figure 11: Pottery Catalogue Nos 1-20 (Scale 1:2.5).

Yorkshire Type wares

There are 61 sherds of this type of pottery (Figure 12, Cat.35-42) in this assemblage deriving from a third of the trenches. The pottery was predominantly jugs largely represented by their handles, which survived best. These distinctively glazed, high quality fabrics are the most common imported pottery in the Scottish east coast burghs in the thirteenth and fourteenth centuries

(McCarthy and Brooks 1988). This assemblage includes a knight with shield (Cat.40) from Trench 24, context 02 (PEX 58) and a decorative arm from a figure jug (Cat.39) from Trench 24, context 06 (PEX 58).

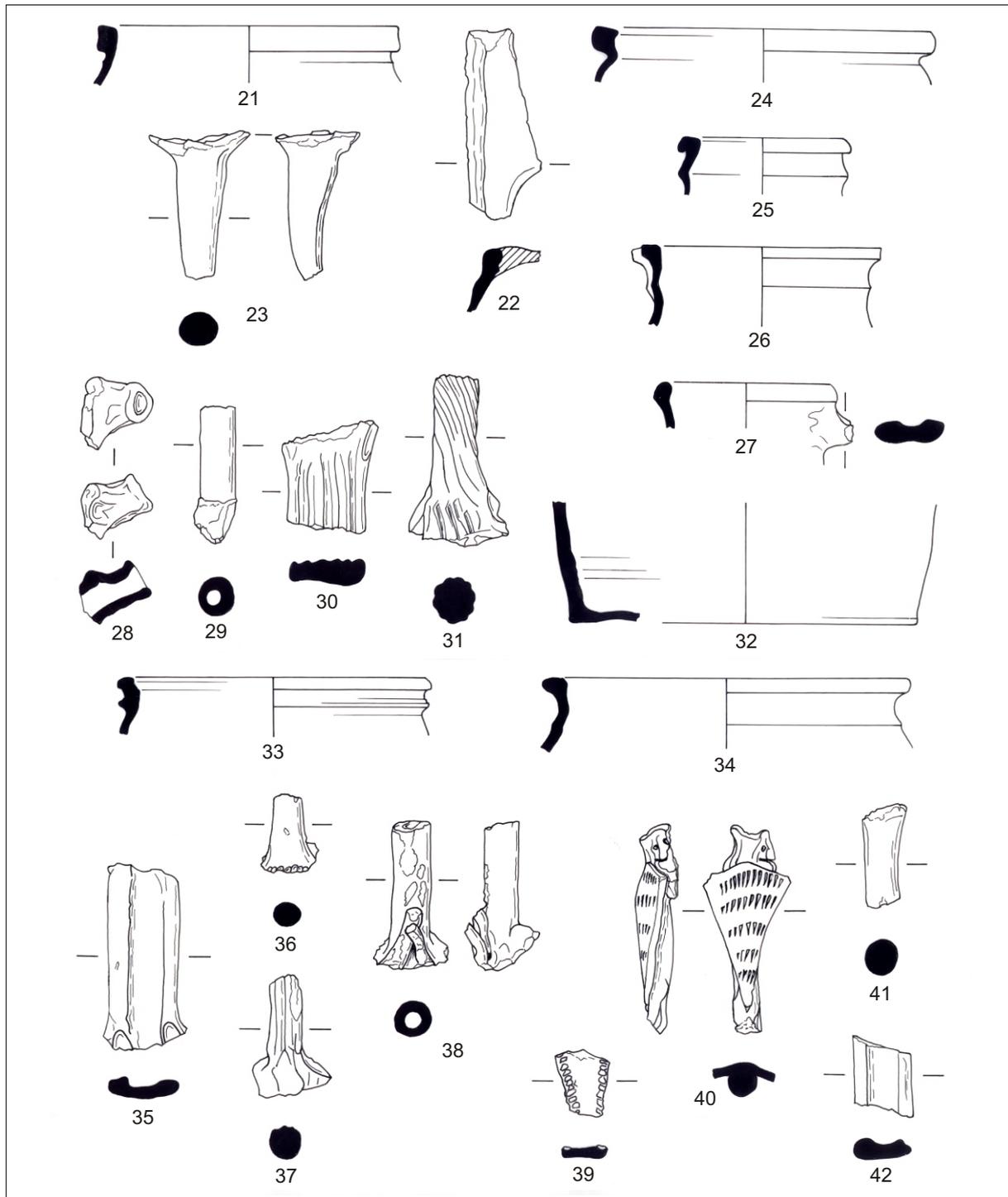


Figure 12: Pottery Catalogue Nos 21-42 (Scale 1:2.5).

Low Countries Redwares

There are only four sherds of this ware (Figure 12, Cat.41) from three trenches across the site (Cat.41). This fabric begins to replace the earlier Low Countries greywares from the mid-fourteenth century onwards (Verhaege 1983, 25). The best groups of this material from previous work in Perth are from the Marks and Spencer site at 75 High Street and Meal Vennel excavations (Cox 1996b). The illustrated sherd is a rod handle from a jug.

Rhenish Stoneware

Only one sherd in this assemblage has been identified as Rhenish Stoneware. These distinctive and very hard-fired fabrics began to be imported into Scotland in the fourteenth and fifteenth centuries (Hurst et al. 1986) as jugs. The fabric is dark grey in colour and covered in a grey salt glaze internally and externally.

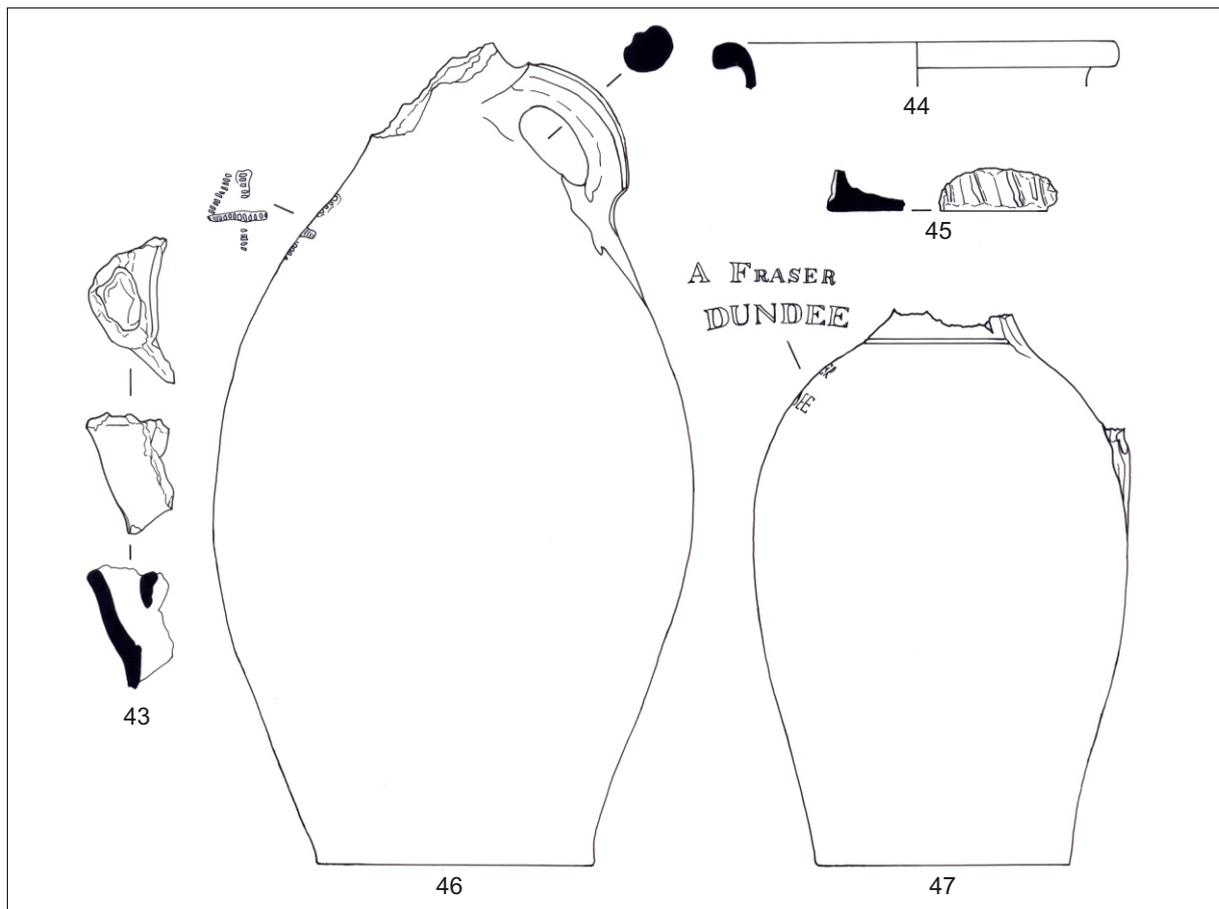


Figure 13: Pottery Catalogue Nos 43-47 (Scale 1:4).

Other Stonewares

This assemblage of five pieces (Figure 13, Cat.46 and 47) includes two complete large jugs or flagons which date from the eighteenth to the nineteenth centuries. One is marked with the number '4', which is made from stamped holes and presumably indicates a consignment number. Catalogue 48 is stamped A FRASER DUNDEE. Both were found in Trench 67 (PEX 59).

Unidentified

The small group of 35 unidentified sherds (Table 2, Cat.43-45) are all likely to be from imported fabrics, potentially of northern English origin.

Discussion

This relatively small assemblage contains some examples of vessels in both the local Redware and imported Yorkshire Type wares. It is very striking that there are no examples of the twelfth-century imported fabrics which were recovered from the King Edward Street excavations on the northern High Street frontage of part of this area (Hall 1995, 952-5). If anything, the presence of the Yorkshire

Type wares would imply that no deposits earlier than the thirteenth or fourteenth centuries were recovered from the watching briefs.

The imported Low Countries Redwares and the Rhenish Stoneware, as well as the Yorkshire Types wares, indicate the importance of sea-borne trade across the North Sea and up the east coast of the British Isles in the medieval period. These quality wares were imported into Perth and may well have influenced the development and production of the redware industry in Scotland (Hall et al. 2012, 17, 70).

The Metalwork

A moderately large and diverse assemblage of artefacts was recovered during the investigation of this site. Included among the assemblage are organic materials, preserved in the favourable anaerobic conditions within extensive midden deposits and pit fills. The artefacts are discussed below by material category, and a brief overall discussion of the value of the artefact evidence follows the material-specific discussions. Measurements are expressed to the nearest 1 mm.

Copper alloy objects

Only two artefacts of copper alloy were recovered. Part of a button (Figure 14, Cat.1) came from an unstratified context in Trench 2 (PEX 58). It represents the rear part of a three-piece button, the face of which is missing. The button is equipped with an Alpha-type eye (Houart 1977, 105-6), a type still used in modern times, although this example dates from the eighteenth or early nineteenth century.

Cat.1: Button. Diameter 16 mm; thickness 9 mm

Rear component of a three-piece button. This part is of concavo-convex form, with a circular eye attached. The face of the button is missing. PEX 58; Trench 2 unstratified; Find No 10.

Made from a single strip of copper alloy, Cat.2 was originally of slightly tapering, cylindrical form, although it is now crushed and distorted. The series of punched indentations on the object's surface might suggest use as a thimble, but they are quite irregular and may simply be decorative. The original diameter of the object indicates that it may be rather too small to have functioned as a thimble. Traces of gilding are further evidence of a decorative function. The object may have served as a collar attached to a cylindrical wooden artefact such as a handle or rod. The variation in the sizes of the surface indentations is probably due to differences in the application of pressure.

Cat.2: Loop or thimble. Height 14 mm; max width (crushed) 20 mm; original external diameter c. 9-10 mm

It is made from a single strip with overlapping ends. Although now flattened by crushing, the object would originally have been cylindrical and slightly tapered, with both ends open. Its external surface bears a series of punched indentations of varied size and spacing. Traces of gilding survive near the upper (narrower) end of the object. PEX 59; Trench 64, unstratified; Find No 46.

Iron objects

The small group of iron artefacts recovered during this investigation are all in an excellent state of preservation, and represent fine examples of artefacts often found in a less complete condition. Two of the objects, a heckle tooth (Cat.4) and a nail (Cat.6) (Figure 14) have surface deposits of vivianite (iron phosphate). Such deposits sometimes occur on objects from waterlogged, organic layers and from other contexts where a source of phosphate is present. On this site, waterlogged midden deposits containing decomposed organic remains and animal dung would have provided a ready source. Vivianite can form a coating over iron, protecting it from further corrosion for a considerable period.

During the medieval period, forks were used to assist in carving meat and in eating small delicacies. The use of forks as components of table cutlery did not begin until the second half of the seventeenth century. Cat.3 (Figure 14) has a slender neck, and the head also appears, from the surviving part, to be of slender form. The wooden handle is plain and with a sub-rectangular cross-section. The overall form of the fork appears consistent with a use in picking up small food items. It is likely to be of medieval date.

Cat.3: Fork. Length 160 mm; max width of handle 17 mm; max thickness of handle 13 mm; max width of head 18 mm

This piece comprises part of a three-pronged head, a slender, oval to circular cross-sectioned neck and a sub-rectangular cross-sectioned wooden handle. The iron component has been attached to the handle using a whittle tang, adjacent to which is a bolster. Corrosion of the tang has caused the wooden handle to split lengthwise along two faces. The handle itself appears plain, although it bears two parallel, diagonal scratches near its terminal. The terminal itself is only roughly finished. PEX 59; Trench 67, unstratified; Find No 41.

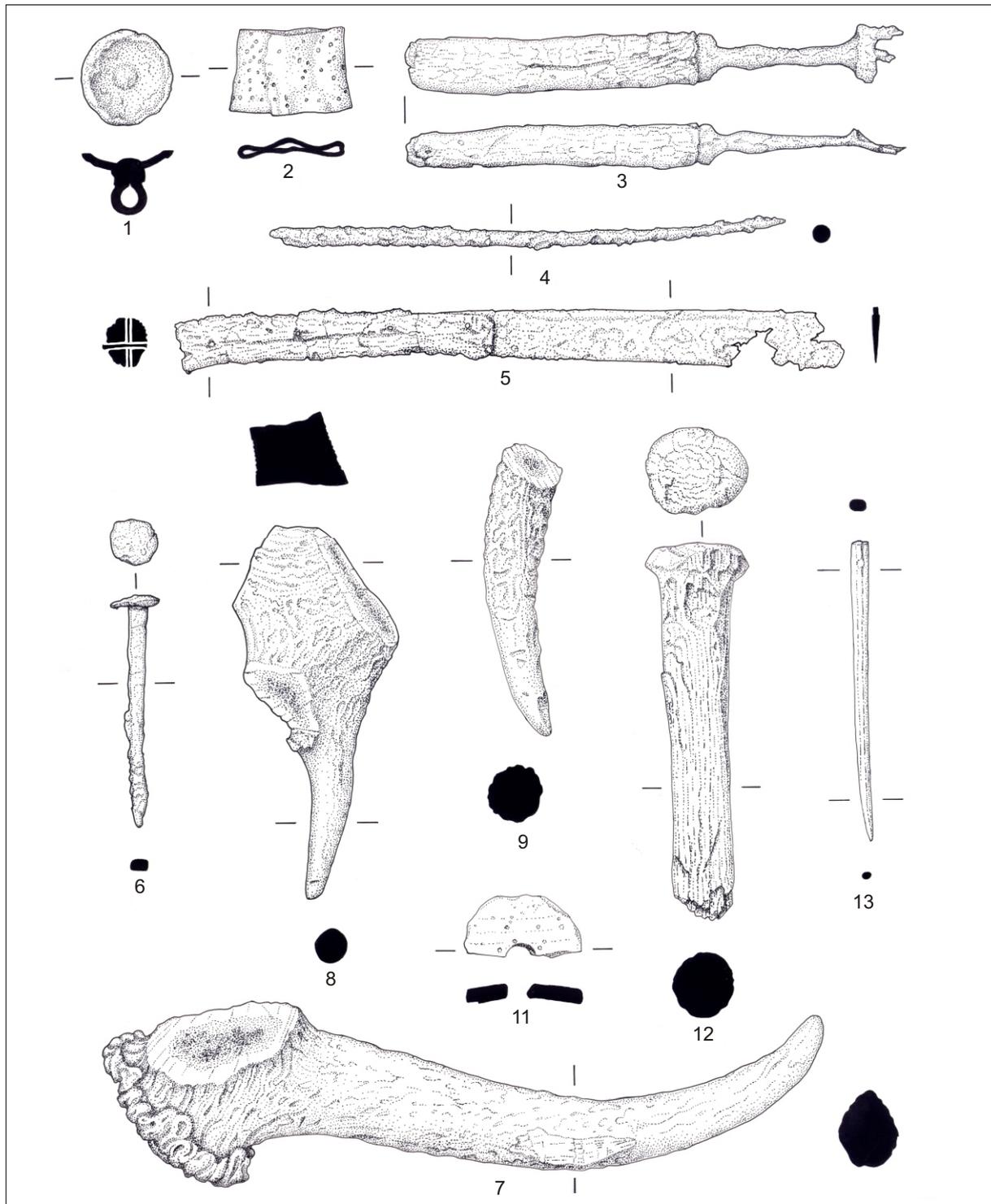


Figure 14: Artefacts Catalogue Nos 1-13.

Cat.4 is a tooth from a heckle (Figure 14). Heckles were used to comb wool and flax in preparation for spinning, and teeth from them have previously been excavated at Kirk Close, King Edward Street and Canal Street, Perth (Ford 1987a, 140, Fig 74, No 119; Ford unpublished; Cox 1996b, 720, illus 17, No 38). Samples of both *Linum* (flax) and wool fibres were recovered at Kirk Close from floor and yard deposits (Robinson 1987, 200-1). The teeth

from heckle or wool combs were frequently found on the PHSAE, where the balance of evidence indicated they were predominantly wool combs of early medieval date (shorter length teeth) and post-twelfth century date (longer ones). The St John's Square example at 165 mm may indicate it was in use after the end of the twelfth century (Franklin and Goodall 2012, 139).

Cat.4: Heckle tooth. Length 165 mm; max diameter 6 mm

The tooth has a circular cross-section, tapering steady from the broken upper end towards the pointed tip. The lower part is slightly curved. PEX 58; Trench 34, Context 01; Find No 14.

A wooden-handled knife with a long, straight-backed blade (Cat.5) was also found in Trench 34. Scale-tanged knives such as this make their first appearance in the mid-fourteenth century, as a study of the large collection of medieval knives from London (Cowgill et al. 1987) indicates. Prior to these, knives were of whittle tang type, in which the tang is inserted into a solid handle.

With its long blade, broadening towards the tip, and the relatively long handle, allowing considerable pressure to be exerted when cutting, Cat.5 may represent a knife used at the table for the cutting and presentation of meat. The appearance of scale-tang knives in the fourteenth century appears to roughly coincide with the emergence of the table knife as a type distinct from general purpose knives, and with increasing functional specialisation of knives in general.

The wooden handle of Cat.5 is both split and slightly distorted. Splits in the wood run in both lengthwise and transverse directions. Wood was widely used for knife handles as it is flexible and strong, but swelling and splitting of the wood in wet conditions was a drawback. Medieval craftsmen clearly recognised this, as some knife handles were equipped with hilt bands to prevent this.

Other scale-tang knives from recent Scottish excavations include an example from the Linlithgow friary site, with a decorated wooden handle (Stones 1989, 162, illus 104, No 247L), two examples from Rattray (Goodall 1993, 175), two from Carrick Castle (Ewart and Baker 1998, 966) and nine from Meal Vennel, Perth, including an almost complete example with bone scales (Cox 1996a, 776, illus 21, No 340). Three scale-tang knives were also found at Canal Street, Perth (Ford 1987a, 131, illus 132, Nos 76, 82 and 83).

Cat.5: Knife. Length 214 mm; max width of blade 19 mm; thickness of blade 2 mm; length of handle 99 mm

Knife of scale-tang construction, with most of the blade and the wooden handle surviving. The blade has a straight back and cutting edge, and broadens towards the tip, where parts of the edge and the tip itself are missing. The handle consists of two wooden scales of D-shaped cross-section, secured by four circular cross-sectioned copper alloy rivets, all of which survive in situ. The handle, which appears to be undecorated, is split both lengthwise and transversely in many places, but most survives. Both the blade and the handle are slightly distorted near their ends. PEX 58; Trench 34, Context 01; Find No 6.

One of only four nails retained by the excavators, Cat.6 (Figure 14) is representative of the most commonly found nail type from medieval Perth (Ford and Walsh 1987; Cox 1996a, 805), with a circular head and a rectangular cross-sectioned shaft. This example survives in excellent condition.

Cat.6: Nail. Length 74 mm; width of head 17 mm

Complete nail with a rectangular cross-sectioned shaft and a roughly circular head, positioned slightly off-centre in relation to the shaft. PEX 59: Trench 67, unstratified; Find No 89.

Glass

A small, embossed bottle with a lipped rim, found in Trench 73 (Cat.10), represents evidence of nineteenth century activity. Small bottles like this one were used to contain cure-alls, various medicinal treatments, dyes, smelling salts and perfumes. At the beginning of the nineteenth century, many liquid medicines for internal use were supplied in the form of a vial containing a single dose, although, by the 1860s, multi-dose bottles were widely used (Jackson 1996, 15). This bottle probably dates from the second half of the nineteenth century. Phosferine was a tonic on sale in the mid to late nineteenth century that consisted of quinine sulphate, diluted sulphuric acid, diluted phosphoric acid, alcohol and water. It cost either 1s 1½d or 2s 9d and was manufactured by Ashton and Parsons Ltd. London, who described the product as the 'Greatest of all Tonics' and 'A Proven Remedy for...'. (BMJ 1911,26).

Cat.10: Bottle. Height 105 mm; max diameter 27 mm; external diameter at rim 20 mm; internal diameter at rim 12 mm

Small, vertical-sided, moulded, cylindrical bottle in clear glass, with a short, narrow neck and a lipped rim. Embossed just below the shoulder is the word 'PHOSFERINE', and a crown with the number '26' below it, is embossed on the base. (Not illustrated). PEX 59; Trench 73, unstratified; Find No 91.

Pottery spindle whorl

Part of a spindle whorl, derived from a sherd of Redware pottery of thirteenth to fifteenth century date (Cat.11, Figure 14) was found in Trench 29 (PEX 59). Along with an iron heckle tooth from Trench 34 (PEX 58) (Cat.4 above), this represents evidence of textile manufacture. Another spindle whorl made from a similar fabric was excavated at Urquhart Castle (Cox 1999a).

Cat.11: Spindle whorl. Diameter 37 mm; thickness 4 mm

Fragment representing approximately half of a spindle whorl, derived from a sherd of Scottish Redware, with patches of green glaze on its convex (external) surface. The whorl has broken across its central perforation (diameter 8 mm). PEX 59; Trench 29, Context 01; Find No 49.

Antler offcuts

Species analysis by Catherine Smith

A group of 26 sawn offcuts of red deer antler was recovered during the investigation. Of these, 23 came from Trench 53, while only a single piece was found in each of Trenches 58, 59, and 71 (all PEX 59).

Most of the pieces (22 out of 26 or 85%) are sawn tines. Some pieces are from crown tines, with up to three points surviving. In other cases the offcut pieces represent only the points of tines. At least three pieces were cut from dead animals, while at least two are from shed antlers. Sawn antler tines have been recovered from several sites in York (Waterman 1959, 93; Radley 1971, 48, 51) and have been interpreted as offcuts from the manufacture of composite combs. As MacGregor (1978, 48) points out, the usual method of

preparing the components of combs was to cut long, flat strips from the antler beam to produce tooth plates and connecting plates, after the burr and tines had been cut from the antler. Once cut to size, the rectangular tooth plates would have been placed between pairs of connecting plates and the whole assembly riveted together. Examination of surviving composite combs clearly shows that the teeth were cut after the plates had been secured in this way. Composite antler combs, with most of their component parts surviving, have been excavated at King Edward Street, Perth (Ford 1995, 968, illus 26, Nos 434-5).

Possibly, however, an interpretation of all the pieces from St John's Square as waste offcuts from comb manufacture would be too simplistic. Some of the pieces, such as the long sections of tines, are large enough by themselves to potentially be used in the manufacture of comb components, and at least two pieces appear to have been sawn in order to remove tines for artefact manufacture. Tines can be made into artefacts other than combs (for example handles), and can be used with little or no modification as pegs or for other temporary uses. A very thin slice appears to have been cut from the surface of Cat.7 (Figure 14), using a knife.

Saws were among the most important implements used in the working of skeletal materials. Examination of the sawn surfaces on these offcuts shows that, on some examples (for example Cat.7), the saw marks are not all aligned in the same direction. The material was probably rotated periodically so that the saw blade would not become too deeply embedded. The width of the saw cuts themselves also varies, which might possibly indicate that more than a single craft worker was responsible for this group of offcuts. Ulbricht (1978) has noted that saw cuts as broad as 2.6 mm and as narrow as 0.1 mm have been observed on antler waste. Small, rough, projecting ridges at one edge of the sawn surface, mostly between 1-2 mm in width, indicate that the last part of the fragment was broken off after sawing was complete (for example Cat.8, Figure 14). This feature measures only 0.3 mm in width in the case of Cat.9 (Figure 14).

It is also notable that saw cuts on two of the antlers both measured 1 mm across, and were

probably made by the same saw, perhaps even by the same person (PEX 59, Trench 53, unstratified, accession numbers 6 and 23; see Red Deer Antler Catalogue). A finer saw was used on an antler in PEX 59, Trench 58 (Figure 15) (accession number 52), which made a cut 0.4 mm across. This may mean that there were two different craftsmen at work in the area, one on South Street, the other on High Street, as there were certainly two different saws being used.

It is difficult to be certain whether concentrations of antler waste represent the activities of craft workers in long-established workshops or of itinerant workers. Localised concentrations of waste, especially where linked to dwellings, may represent evidence of the former. In medieval Lund, Sweden between the mid-twelfth and mid-fourteenth centuries, production was concentrated in the area around the market place, and was carried out in specialised premises (MacGregor 1985, 50).

This large group of offcuts from St John's Square represents important evidence for the manufacture of antler artefacts within the medieval burgh, and its concentration in a single location may well point to the existence of a workshop, whether long-established or short-lived, in the near vicinity.

Cat.7: Offcut. Length of outer curvature 220 mm; width of sawn surface 56 mm

Shed burr, with the beam sawn off. A single tine survives almost intact, but a thin slice has been cut from its surface with a knife. PEX 59; Trench 53, unstratified; Find No 5.

Cat.8: Offcut. Length of outer curvature 116 mm; widths of sawn surfaces 48 mm, 33 mm and 32 mm

Crown tine with a single point surviving. There are three sawn surfaces, all of which exhibit a rough part of the edge where pieces were broken off on the completion of sawing. PEX 59; Trench 53, unstratified; Find No 22.

Cat.9: Tine. Length 95 mm; width of sawn surface 22 mm

Sawn tine. There is a very small projection (width 0.3 mm) at one edge of the sawn

surface. PEX 59; Trench 53, unstratified; Find No 13.

Wooden objects

Species identification by Lesley Lind

A peg or dowel (Cat.12, Figure 14), made from willow, was recovered from Trench 70 (PEX 59). Peg-like artefacts could have functioned in a variety of ways. Some fall into a category of artefacts that were driven into the ground to tether or anchor something. Damage to the narrower end of the object would be expected if it had been used in this way. This example shows some damage and abrasion at the roughly finished end, but no damage on its sides consistent with having been driven into compact, stony soil. Another possibility is that the object represents a form of dowel. Dowels, used in the jointing of structural timbers (including roofing) are approximately cylindrical, as this one is, and tapers only very slightly. Cat.12 has a slight taper, but also (unlike many dowels) has a broad, nail-like head. The bevelled form of the head would have ensured a secure fit, had this piece been used as a dowel and hammered into place, for example in a structural beam.

Wooden pegs like Cat.12 may also have been used to secure thatch onto roofs or to secure weighted ropes holding the thatch in place (see also Cat.14 below).

Cat.12: Peg or dowel. Length 117 mm; max width of head 31 mm

Circular to oval cross-sectioned peg, derived from willow (*Salix sp.*). It tapers slightly, below a nail-type, oval head. The opposite end is broken. PEX59; Trench 70, unstratified; Find No 67.

A slender, slightly curved pin (Cat.13, Figure 14), probably made from ash wood was found in an unstratified context in Trench 2. Paring marks are visible along its length, and it tapers to a fine point. Its function is uncertain, and there are many possibilities as to its use. It may have been used to secure textile (for example in clothing), although being very fine it would not withstand more than light pressure. Bone pins, made from pig fibulae, were probably used for this purpose, although it is conceivable that slender wooden pins such as this example may have been

similarly used, but surviving less commonly in the archaeological record except where waterlogged conditions prevail. Similar pins may have also been used in hair, as toothpicks or as tools for marking or scratching, as is suggested for three pins with broken tips excavated at Kirk Close and High Street (Ford 1987b, 145). Cat.13 has no damage to its tip consistent with this latter function.

Cat.13: Pin. Length 98 mm; max width 5 mm; max thickness 4 mm

Slender, tapering and slightly curved pin of approximately oval cross-section, probably derived from ash (*Fraxinus excelsior* L.). It is undecorated, although there is a small scar c. 23 mm above the tip. The top of the shaft is slightly rounded. PEX58; Trench 2, unstratified; Find No 13.

Moss rope

Botanical species identification by Lesley Lind

A fragment of plaited moss rope (Cat.14) was recovered from Trench 35 (PEX 58). The deposit surrounding the fragment was sampled for botanical remains, and the results of this are described below. The rope was made from strands of *Polytrichum commune* (common hair moss), and consists of three plaits of material, woven together. One end of the fragment is roughly torn, but the other may have been cut.

Polytrichum commune is a large British moss species, commonly found on wet moorland and in open woodland, on highly acidic soils, and also occurs on 'white moor' along with *Nardus stricta* (mat grass). The stems are long, and the leaves, which spread widely from the stems, have toothed margins (Brightman 1979, 80-1). The moss may have been collected along with heather, which is usually the dominant flowering plant on upland peaty soils. Heather fragments, along with twigs and seeds, were recovered from the deposit in which the rope lay.

With very strong, pliable stems, *Polytrichum commune* is ideally suited for plaiting. Ropes made from this moss were used in prehistoric times in the caulking of boats (Dickson 1973, 192-3). A basket from Roman Newstead was woven from *Polytrichum* stems, and the use of moss continued into recent times for making baskets and the heads of brushes (Curle 1911).

Ropes were commonly used in a variety of ways to secure roofing thatch until the second half of the eighteenth century (Fenton 1976), and it is possible that moss ropes were used for this purpose on buildings in medieval Perth. In the Northern Isles, large, flat stones were tied onto the ends of the ropes to keep them tight, and wooden pins were also used to hold them in place (ibid). Heather, bracken, and straw were all identified in floor deposits at Kirk Close, Perth (Robinson 1987, 200-1) and may have been used as flooring or roofing materials.

Plaited fragments of *Polytrichum commune* have also been recovered from other excavations within the burgh, at Kirk Close (Ford and Robinson 1987), High Street (Fraser and Smith 2011, 79) and South Street (Cox 1999b). The Kirk Close examples were all from contexts dated to the late fourteenth century. Other examples of medieval date have been recovered from waterlogged deposits in a number of English towns and cities, including Durham (Carver 1979).

Cat.14: Moss rope. Length 241 mm; max width 49 mm; widths of individual plaits 24-31 mm

Fragment of a plaited rope, made from strands of *Polytrichum commune* (common hair moss). The rope consists of three plaits, woven together. Both ends of this fragment are broken, although, whereas one end appears to have been roughly torn, at the other end the plaits come to a more abrupt end and was possibly cut or chopped across (although many fibres are missing, making this uncertain). PEX 58; Trench 35, unstratified; Find No 5 (not illustrated)

Leather

By Clare Thomas

The 83 fragments of leather consisted chiefly of 68 shoe parts. Also present were one strap, two miscellaneous items and nine items of waste material.

The shoes are all of turnshoe construction, with a single sole and upper made inside-out then turned, with the seam on the inside. The seam was strengthened and made more waterproof by the inclusion of a rand, a wedge-shaped strip of leather, eight examples of which were found.



Figure 15: Artefacts Catalogue Nos 15-19 (Scale 1:4).

Fragments of upper were linked by butted edge-flesh stitching channels. Triangular or semi-circular heel-stiffeners were used to reinforce the quarters. Surviving fragments of thread show that both linen and wool were used. Linen thread was the normal construction thread but rarely survives from medieval Perth because of damp conditions. A single linen fibre was found at South Methven Street (Robinson 1987, 199-209). Woollen yarn was much less commonly used but was well represented at the Marks and Spencer site (PHSAE), 75 High Street, where at least 53 examples were found (Thomas and Bogdan 2012). Woollen thread is known from London, York and Winchester, but only from tenth to eleventh century contexts (Pritchard 1991, 219, 221; MacGregor 1982, 138, 140; Thornton 1990, 707-8).

Soles were repaired by the addition of clump soles or patches, as demonstrated by five forepart and three seat clumps, as well as by tunnel stitching on six soles. Thirteen soles or foreparts were complete enough for comparison purposes, especially with those from PHSAE. Six resembled Perth High Street (PHS) Type 2, with their straight alignment and oval toes. Two were of the more natural foot-shaped PHS Type 3, while another two, with slender foreparts and pointed toes were probably PHS Type 4. One was either Type 2 or 3, and one Type 3 or 5, the latter a broader version of Type 4. One broad forepart with a centrally positioned pointed toe has no obvious parallels. At Perth High Street, Types 2, 3 and 4 ranged from the twelfth to the fourteenth centuries but Types 2 and 3 were predominantly of thirteenth century date, while the majority of Type 4s were from fourteenth century contexts. Type 5 soles were of thirteenth to fourteenth century date (Thomas and Bogdan 2012, 172).

The upper fragments were less complete. Cat.15 (Figure 15) is probably of a low-cut shoe. One upper without any evidence for fastening is possibly PHS Type A, while a tunnel hole for a horizontal thong suggests Type B. A round hole near a vamp throat could indicate either Type B or Type K. A fragment of quarters with a domed top edge could be Type E. At PHSAE, Types A, B and E were mainly of twelfth century date, whereas most examples of Type K came from fourteenth century contexts (Thomas and Bogdan 2012, 227). Thus, comparison with elsewhere suggests

that the leather could be of twelfth to fourteenth century date.

The waste material could be from either primary manufacture of shoes or from secondary repair or reuse. Most of the shoes were quite worn, with evidence for repair. This is normal for medieval footwear, as the single soles wore very quickly and could not be easily replaced. Four of the upper fragments have been cut, possibly to allow reuse of less worn parts. The preponderance of shoe leather, as opposed to waste material, implies that this is not debris from either the manufacture of new shoes or cobbling. The shoes are also of plain, simple styles, with no evidence for decoration, such as embroidered ribs or ornamental slashes. This suggests that these were ordinary, everyday shoes.

In conclusion, this is a small assemblage of discarded shoes and associated fragments of leather, typical in both style and construction of the twelfth to the fourteenth centuries.

Cat.15: Matching forepart of sole and vamp of upper. Front of left forepart with oval toe. Edge-flesh stitching channel. Irregularly torn or cracked across tread, where worn very thin. Partially delaminated. Length 115 mm; width 95 mm; thickness 3-4 mm. Probably PHS Type 3.

Also, matching vamp of upper, with lasting margin with grain-flesh stitching channel and with edge-flesh stitching channel on vamp wing and on portion of vamp throat immediately above wing. Worn, with rest of vamp throat torn and with lasting margin missing on outer edge, and with other tears. Approximate length, from toe to throat, 175 mm. Thickness 1.5 mm. Position of vamp throat stitching channel suggests that this might have been a low-cut shoe rather than a boot. PEX 59, Trench 59, unstratified; Find Nos 102 and 104.

Cat.16: Sole. Complete symmetrical sole, probably right foot, with broad seat, slight narrowing at waist, wide forepart, ending in centrally positioned narrow oval toe, almost pointed. Edge-flesh stitching channel. Worn, with short tear at front of forepart; delaminated. Length 242 mm; width of seat 78 mm; width of waist 66 mm; width of forepart 95 mm;

thickness 2-3 mm. PHS Type 2. PEX 59, Trench 59, unstratified; Find No 36.

Cat.17: Sole. Complete right sole, with slender waist, broad forepart and oval toe; on a fairly straight alignment. Edge-flesh stitching channel; faint trace of tunnel stitching for forepart clump. Worn, with stitching channel partially detached on outer edge of seat, and with tear at outer front of seat; also, hole in front forepart caused by repair stitching. Length approximately 200 mm, but distorted; width of seat 60 mm; width of waist 32 mm; width of forepart 76 mm; thickness 2 mm. Similar to PHS Type 2, but with narrow waist. PEX 59, Trench 19, unstratified; Find No 118.

Cat 18: Sole. Complete slender right sole, with long seat, narrow waist and inwardly inclined forepart, ending in oval toe. Edge-flesh stitching channel and tunnel stitching for forepart and seat clumps. Very worn, with holes in centre and front forepart. Length approximately 255 mm, but distorted; width of seat 60 mm; width of waist 30 mm; width of forepart 80 mm; thickness 2 mm. PHS Type 3. PEX 59, Trench 59, unstratified; Find No 44.

Cat 19: Forepart of sole. Fragment of right forepart with broad central point, straight inner edge, curved outer edge. Edge-flesh stitching channel. Torn across tread, otherwise not very worn. Length 90 mm; width 70 mm; thickness 3 mm.

Also, four fragments of soles, possibly PHS Type 2, one PHS Type 2/3, one PHS Type 3/5, and two similar to PHS Type 4, symmetrical variant, as well as 15 other sole fragments, one with linen thread, one with woollen yarn.

One upper of one-piece design with no apparent fastening, (PHS Type A), one quarters with domed top-edge (PHS Type E), one vamp possibly PHS Type B or K, one possibly PHS Type B, as well as sixteen other upper fragments.

Also, five forepart and three seat clumps, eight fragments of rand, one other stitching channel, one strap and three fragments of binding, and two thongs knotted together.

One possible primary offcut, with peg-hole, two triangular offcuts, two trapezoidal, three irregular, one scrap and two miscellaneous fragments. PEX 59, Trench 59, unstratified; Find No 101.

Discussion of the artefact evidence

Despite the difficulties of archaeological recording during the watching briefs, the recovered artefact assemblage provides valuable evidence for craftwork activities taking place in the core of the medieval burgh. Excellent conditions for organic preservation within the middens and pit fills encountered during this work led to the survival of a more diverse range of material and artefact types than would otherwise be expected.

Evidence for the preparation of textiles was recovered in the form of an iron heckle tooth and a ceramic spindle whorl (Cat.4 and Cat.11, above). The heckle tooth is one of two iron artefacts bearing vivianite (iron phosphate) deposits, formed in the phosphate-rich burial environment, which helped to protect them from further corrosion. The concentration of antler offcuts in Trench 53 (PEX 59) may indicate the existence of workshop in the near vicinity and provides important evidence for the manufacture of antler artefacts within the medieval burgh. The assemblage of leather, however, dominated by shoe parts rather than manufacturing debris, appears to be diagnostic of discarded leather items rather than a concentration of workshop activity.

The Faunal Remains

By Catherine Smith

(The full specialist analysis of the faunal remains can be found in the site archive)

Introduction

Animal bones as well as antlers were recovered from the watching brief on St John's Square. All of the bones were very well preserved with little evidence of either weathering or more recent damage. However, most of them were stained to a dark brown colour, typical of Perth's waterlogged deposits and similar in appearance to material from the High Street (PHSAE), King Edward Street and Mill Street.

	PEX 55	PEX 58	PEX 59	Total
Cattle	6	54	133	193
Sheep/goat	4	26	40	70
Goat	-	1	10	11
Pig	-	17	12	29
Horse	-	-	3	3
Red deer (excluding antler)	(2 antler)	3	4 (+26 antler)	7 (+28 antler)
Roe deer	-	1	1	2
Dog	-	29	1	30
Dog/fox	-	2	-	2
Cat	-	13	1	14
Hare	-	1	-	1
Large ungulate	14	68	59	141
Small ungulate	1	21	13	35
Indeterminate mammal	7	19	25	51
Domestic fowl	-	14	1	15
cf Fowl	1	1	1	3
Goose	-	2	2	4
Fish	2	4	12	18
Total	35	276	318	629

Table 3: Total number of animal bone fragments from PEX 55, 58 and 59.

Methods and measurement

The mammal and bird bones were identified by direct comparison with modern comparative material and were allocated to particular bone and species where possible. Where it was not possible to identify bones as far as species, the terms *large ungulate*, *small ungulate* and *indeterminate mammal* were used: thus all large vertebrae other than the atlas and axis were described as large ungulate, while small vertebrae were described as small ungulate. Ribs were similarly allocated depending on their size. On the basis of probability, large ungulate bones were most likely to have come from cattle, but could also have come from horse or red deer. Similarly, small ungulate bones were most likely to have come from sheep, but could possibly have originated from goat, pig or roe deer. All other mammalian fragments for which neither species nor bone could be ascertained were described as indeterminate mammal. Boessneck's (1971) criteria for differentiating between the bones of sheep and goat, which are morphologically very similar, were applied where feasible.

Measurements were made in accordance with the scheme of von den Driesch (1976) and are expressed in millimetres. Mandibular tooth wear and eruption patterns were assessed using Grant's (1982) scheme for cattle, sheep/goats and pigs, as well as Payne's (1973) scheme for sheep/goats. Horn cores were aged using Armitage's (1982) criteria.

Species present

The numbers of fragments from each species identified are shown in Table 3. The assemblage was dominated by the remains of cattle and sheep/goats. Goats were represented only by horn cores, although some of the mandibles displayed goat-like characteristics (showing more substantial muscle attachments at the angle of the jaw than in sheep) and other post-cranial bones may also have been present. Pigs and horses, although present, were not numerous. Bones of dogs were more plentiful than those of cats and came mainly from partial skeletons rather than isolated single bones. Canine bones which may have come from either foxes or gracile dogs were also recovered, as was a single bone of hare (*Lepus* sp). Red deer was represented both by long bones and antler fragments, although the latter were more numerous. Bones of roe deer were also recovered. Only two bird species were present, the domestic fowl (*Gallus gallus*) and goose (*Anser anser*). The goose bones may have come from the wild greylag, or from its domesticated descendant, both being of a similar size in the medieval period.

Marine mollusc shells were also present. The most numerous species was the oyster (*Ostrea edulis*). A few valves from the mussel (*Mytilus edulis*) and a single limpet shell (*Patella* sp) were also found.

Relative frequency of animals

Given that the bones were recovered from piling holes and trenches, which were not dug primarily for the purposes of archaeological research, the recovery rate of the different species was probably more dependent on the agility and eyesight of the excavators than would be the case under less intense rescue conditions. However, if the percentages of the main food-forming mammals (cattle, sheep/goat, pig, horse and deer, excluding antlers) are compared with similar figures for other documented sites in Perth, it can be seen that the St John's Square data agrees very favourably indeed (see Tables 4 and 5). This is particularly true of the sites to which the watching briefs were in closest proximity, PHSAE, Meal Vennel (medieval Phases 1-3) and King Edward Street, and seems to indicate that the retrieval rate at St John's Square was very good. At all of these sites, cattle were noticeably dominant over the other species, while sheep/goats were the second most numerous mammals. Although it is not always possible to separate the sheep from the goats, a small but significant number of goat horn cores was present at St John's Square, as at PHSAE, King Edward Street, Meal Vennel, Mill Street and 80-86 High Street. However, at none of the sites in Perth is the proportion of red and roe deer bones (as opposed to unattached antlers) as high as at St John's Square. This certainly indicates that animals were killed and brought to the site.

Species	PEX 55		PEX 58		PEX 59		Average	
	no.	%	no.	%	no.	%	no.	%
Cattle	6	60	54	52.9	133	65.5	193	61.3
Sheep/ goat	4	40	26	25.5	40	19.7	70	22.2
Goat	-	-	1	1	10	4.9	11	3.5
Pig	-	-	17	16.7	12	5.9	29	9.2
Horse	-	-			3	1.5	3	1
Deer*	-	-	4	3.9	5	2.5	9	2.9
Total	10	100	102	100	203	100	315	100.1

* unattached antler fragments are omitted

Table 4: Numbers and percentages of food-forming mammals at St John's Square.

The bones were butchered in the same way as for other large mammals and the venison was presumably eaten. Cuts on the frontal bones of deer skulls indicated that the hide was carefully removed from around the bases of the antlers.

Certainly, antlers, which had been naturally shed, were also collected in the wild, but these are not included in the bone counts, since the animals from which they came were not killed. These figures for deer are comparable with those from the more northerly burghs of Aberdeen and Elgin.

Age of animals at death

Assigning ages at death to the bones and mandibles provides valuable information on herd and flock structure and site economy. At this site the retrieval rate was assumed to be a true indicator of the sample originally deposited (by virtue of excellent preservation and comparability with more formally excavated sites), and so the results are thought to be reasonably reliable.

Cattle, sheep/goat and pig mandibles were assessed as to tooth eruption and wear pattern, after the systems of Grant (1982) and Payne (1973). For cattle, all of the mandibles came from adults, most of which showed some degree of wear on the fifth cusp (third pillar) of the lower third molar. In the case of sheep/goats, although one animal was killed in its first year (Payne's stage C) and one in its second year (Stage D), most of the sheep were in their third year or older at death (Table 6). For pigs, evidence was rather scantier but indicated that one animal was killed at an age below 8 months while at least one animal older than 20 months was present, (dates of death are based on Habermehl's data for late-maturing pigs, as quoted in Bull and Payne 1982).

Long bone and horn core evidence was also considered for the cattle at St John's Square. Nine of the 11 cattle horn cores were thought to come from animals in Armitage's age classes 4 and 5, and were therefore from adults. Two, however, came from juvenile/immature animals at age class 2 (Table 7). The epiphyseal fusion evidence presented in Table 8 also indicates that younger cattle were present, although the majority of the long bones came from immature/adult or adult beasts. Comparison with the equivalent evidence for the sheep/goats at St John's Square indicates that more sheep than cattle were killed when young (age classes F, J and J/I) (Table 9), a pattern which is consistent with other sites from medieval Perth.

Site	Cattle	Sheep/ Goat*	Goat	Pig	Horse	Deer
St John's Square (PEX 55, 58, 59)	61.3	22.2	3.5	9.2	1	2.9
High Street ¹	63.5	22.2	4.9	8.3	1	0.1
80-86 High Street ²	51.4	35.1	2.8	10.1	0.4	0.2
St Ann's Lane ³	57.6	32.8	*	8.9	0.4	0.2
South Methven Street ⁴	81.5	17.3	*	1.2	-	-
Kirk Close ⁴	76.1	18.7	*	4.8	0.2	0.1
Mill Street ⁵	62.7	26.3	4.1	3.8	3	0.2
King Edward Street ⁵	62.6	23.3	2.8	10.5	0.5	0.3
Kinnoull Street ⁵	63.1	29.3	*	7.6	-	-
Blackfriars House ⁵	67.1	21.4	*	11.4	-	-
Scott Street ⁶	66.7	27.8	0.2	3	2.1	0.2
Canal Street I ⁷	58.2	32.1	0.1	5.8	3.6	-
Canal Street II ⁴	67.7	27.1	*	3.4	1.8	-
Canal Street III ⁸	66	28.1	*	4.5	1.3	0.1
Meal Vennel Phases 1 – 3 ⁶	65.2	23.9	2.6	6.9	1.1	0.1
Meal Vennel Phases 4 – 5 ⁶	74.3	17.4	1.3	5.8	0.8	0.4
Meal Vennel Phases 6 – 7 ⁶	62	30.8	0.4	4.6	2	0.1

Notes

teeth are omitted from the fragment count

unattached antler fragments of deer are omitted

* indicates sheep and goat are expressed as one figure

References

1. Hodgson et al (2011); 2. Smith (1997); 3. Hodgson & Jones (1982); 4. Smith & Hodgson (1987); 5. Smith (1995); 6. Smith (1996a); 7. Hodgson & Jones (1983); 8. Smith (1996b)

Table 5: Comparison of percentages of main food forming mammals at sites in Perth (based on fragment count).

Stage	no.	%	Age inference
C	1	7.7	6-12 months
D	1	7.7	1-2 years
E	5	38.5	2-3 years
F	3	23.1	3-4 years
G	1	7.7	4-6 years
H	2	15.4	6-8 years
Total	13	100.1	-

Table 6: Total number of sheep/goat mandibles in each of Payne's (1973) stages.

Site	Context/ Trench	Context	Age class	Possible sex
PEX 58	34	-	5	♀/O
PEX 58	34	01	2	♀/O
PEX 58	34	01	5	♀/O
PEX 58	34	01	4	♀/O
PEX 58	66	01	4	♀/O
PEX 59	59	-	4	?♂
PEX 59	59	-	5	♀/O
PEX 59	59	-	2	-
PEX 59	59	-	5	♀/O
PEX 59	70	-	5	♀/O
PEX 59	71	-	5	♀/O

Key

♀ = female O = castrate/stirk ♂ = male

Table 7: Cattle horn cores, aged according to Armitage's (1982) scheme.

Age category	PEX 55	PEX 58	PEX 59	St John's Square Average	
	no.	no.	no.	no.	%
J	-	-	1	1	2
J/I	-	-	3	3	6.1
I	-	1	1	2	4.1
I/A	-	3	12	15	30.6
A	2	11	15	28	57.1
Total	2	15	32	49	99.9

Key to tables 8 and 9

F	foetal/neonatal
J	juvenile
J/I	juvenile or immature
I	immature
I/A	immature or adult
A	adult

Table 8: Cattle long bones arranged according to age category on the basis of epiphyseal fusion.

Age category	PEX 55	PEX 58	PEX 59	St John's Square average	
	no.	no.	no.	no.	%
F			1	1	4.3
J		1		1	4.3
J/I		2	4	6	26.1
I			2	2	8.7
I/A	1	2	3	6	26.1
A	1	1	5	7	30.4
Total	2	6	15	23	99.9

Table 9: Sheep/goat long bones arranged according to age category on the basis of epiphyseal fusion.

For male Scottish red deer, age may be estimated from the development of the antler tines (see Smith 2015, 40). In the St John's Square assemblage (most of which came from PEX 59, Trench 53), at least six animals possessed three crown tines and were thus in their sixth year or greater. One animal bore two points on top and was thus in at least its fourth year, and four animals possessed a brow tine, indicating they were in at least their second year. It is fairly obvious from the large size of the antlers that these ages are underestimates and should be treated as minimum ages (see table in the site archive).

Size of the animals

Anatomical measurements were made on the bones wherever they were not damaged by butchery (see table in the site archive). The

dimensions of the domestic livestock mainly fell within the ranges recorded for the major medieval assemblage recovered from PHSAE (Hodgson 1980; 1983; Hodgson et al. 2011). Cattle were recorded from St John's Square with a withers height of 108.5-111.7 cm, estimated from the greatest length of the metatarsal, compared with a range of 95.6-113.4 cm at PHSAE. Thus these animals were of a small stature, typical of those from medieval Scotland.

The sheep from St John's Square were similarly small and spindly-legged, although no intact bones survived from which to estimate withers height. The bone sizes, however, corresponded well with those from PHSAE.

Three partial dog skeletons from PEX 58, Trenches 34 and 66 were estimated to belong to animals which stood at about 50.3 cm, 53.6 cm and 54.1 cm at the shoulder (based on Harcourt's 1974 factors). This is a typical height for dogs from Perth; most tend to cluster around 50 cm. The tallest dog recorded from Perth was from Meal Vennel and stood at about 63.7 cm, while the smallest example came from PHSAE and was only 23.4 cm high (Smith 1998, 862).

For the red deer, few dimensions other than measurements on the antler burr and pedicle were available (see table in the site archive). Comparison with the antler assemblage from medieval Linlithgow and other medieval sites in Perth, Elgin and Aberdeen (Smith 2015) was favourable, although the St John's Square means were smaller than those from Linlithgow. However, all of the medieval antlers, regardless of site, came from large, well-grown animals, in sharp contrast to the small deer on the hill today.

Evidence of craft industries at St John's Square

Comparison of the proportions of different bone elements from the larger mammals indicates that the percentage of horn cores from cattle and goat was higher than expected. This was certainly also true of the proportion of red deer antlers compared with other skeletal parts. Scrutiny of the horn cores indicated that some bore fine knife cuts on the frontal bone of the skull, in the area where the connective tissue of the horny sheath merges with the skin covering the head. These

cuts therefore represent either careful skinning out of the hide, or removal of the keratinous horn sheath from the bony core (which would have been discarded into the midden). Such high proportions of cattle and goat horn cores have also been noticed at sites in close proximity to St John's Square, in particular PHSAE (Hodgson et al. 2011). Elsewhere in the burgh, at Curfew Row and the Pullars site, significant numbers of cattle and goat horn cores indicate horn-working, while a deposit composed almost entirely of cattle horn cores was recovered from a ditch at South Methven Street (Smith 1987; Smith and Hodgson 1987).

The recovery of a large number of red deer antler offcuts from St John's Square, particularly from PEX 59, Trench 53 (Figure 14) indicates that a craftsman's workshop, utilising both antler and horn, was probably located nearby (see Cox above). Offcuts from the base of the antler, consisting of the burr, base of the beam and base of the brow tine represent the minimum amount of wastage; these were common in the St John's Square material, as they were in the comparable assemblage from Linlithgow High Street (Smith 2015). The use of the beam for the production of combs and tines for other objects is discussed in Cox (Antler Offcuts, above).

It is also notable that numerous scraps of leather, as well as shoe soles and uppers were recovered from many of the deposits, and were in some cases associated with contexts which also contained antler and horn cores. Thomas (above) has shown that most of the leather was from discarded worn-out items, although some of the scraps could have come from primary leather working. It is however worth noting that the skimmers' and horners' trades were closely associated with one another, since their raw materials came from the same sources. Indeed, some of the antlers bore fine knife cuts on the frontal bone (site accession number 8) which may be associated with carefully skinning out the head, and it has been noted above that similar knife cuts occur on the frontal bones of the cattle.

Some of the deposits in St John's Square contained nearly complete dog skeletons (PEX 58). Although the bones were examined closely for knife cuts, none were found. This does not,

however, mean that the animals were not skinned for their pelts, as this seems to have been the fate of many medieval canines, particularly at sites on the High Street (Smith 1998). Similarly, none of the cat bones from PEX 58 bore evidence of knife cuts, but, since there appears to have been a cottage cat skinning industry located at the site of 80-86 High Street (Smith 1997, 770), it is quite likely that no cat with an attractive pelt was safe in the vicinity in the medieval period.

Discussion

The St John's Square faunal material has proved of great interest to the interpretation of craft industries in medieval Perth. Nowhere else in the burgh has such a concentration of antler offcuts been found, and it is apparent that a workshop, perhaps producing combs, must have been located there. The antler deposits of St John's Square are matched only by an assemblage recovered from Linlithgow High Street (Smith 2015), incidentally a town famed for its leather work.

It seems also that skinning and leather work may have taken place at St John's Square. The craft workshops were probably located close together in the backlands, with the raw materials of the various trades readily available. Traditionally, similar trades were clustered together in the medieval burghs, and it is notable that South Street continued to be home to many of Perth's cobblers until the early modern period, the street being known variously as 'Shoegate' or 'Shaegate' in the eighteenth century (Urquhart 1906, 206; Fothergill 1979, 12). As for the horner craft, there is a vennel named Horner's Lane running northwards from South Street to Canal Street, but there is some dispute as to whether it took its name from a person named Horner (Fothergill 1979, 17). It is however more likely to have been named for the craft itself.

Environmental Report

By Catherine Smith and Lesley Lind

A fragment of unstratified moss rope was recovered from PEX 58, Trench 35 (see also Cox, above, Cat.14). The loam in which the rope was embedded was sampled for botanical remains. A subsample of 0.2 kg in weight was soaked in distilled water for 24 hours then washed through

2 mm and 300µm sieves and the resulting residue examined using a binocular microscope.

The moss rope itself was composed of strands of *Polytrichum commune*, a common and conspicuous moorland species (Watson 1955, 119-20). The loam in which the rope was embedded contained small twigs, heather fragments and seeds (see table in the site archive). Most of the seeds were ruderal species, which occur as weeds amongst cultivated cereal crops. These included the common cornfield weeds, corn cockle (*Agrostemma githago*) and possible corn marigold (*Chrysanthemum* sp). A small number of carbonised cereal caryopses were also found: these came from wheat and oats. It was not possible to say whether the oat species were white oat (*Avena fatua*) or the grey/black/bristle oat (*A. strigosa*). Both species have been recorded at medieval sites in north-east Scotland, but it is the latter which is thought to have been more widely cultivated.

Part of a hazel nut shell was also found in the sample. Hazel nuts are ubiquitous on sites in Perth, and appear to have been collected as a seasonal food. Another hazel nut shell fragment was also recovered from the hand-excavated material (PEX 59, Trench 71, unstratified).

The Brassica seed could have come from either a wild species, or a cultivated plant. Kale, a blanket term for vegetables of the Brassica family in Scotland, is mentioned in the Perth Guildry book as one of the foodstuffs which could only be sold on a mercat day (Stavert 1993, 408).

Discussion

Editor's Note

The discussion in the original manuscript (preserved and accessible in Historic Environment Scotland, John Sinclair House, Edinburgh), followed themes that were important at the time, such as the use of watching briefs in urban areas in general, especially watching briefs on pile holes, and the origin of middens and garden soil. Although some of that discussion has

been omitted, other elements of it are either distributed elsewhere in this publication, or elaborated in a more succinct way below. New themes have also been introduced to understand the evidence and make better use of it in the light of the publication of the Perth High Street excavations.

Site conditions

At the time of the demolition of the old shopping centre at St John's Square, the instigation of the watching briefs and before the construction of the new building in the 1980s (Plate 8), planning and construction in Scotland was in the process of significant change. The Construction Design and Management (CDM) regulations did not come into existence until 1994, and planning legislation that concerned archaeology only appeared the same year. The CDM regulations would have restricted the many improvised changes to the piling regime, while the planning legislation would have permitted in a much more adequate archaeological response. A few years later the situation would have been quite different and the new shopping centre would probably have been moved out of town, and its construction would have been significantly altered.

However, despite the then lack of regulations, the very difficult working conditions of the archaeologists on the watching brief (continuous construction work, heavy machinery and noise, and winter weather including snow) (Plate 9), it is remarkable how much information was retrieved. Unlike the Perth High Street excavations of ten years earlier, which were an open area excavation, where the outlines of buildings could be traced with certainty, boundaries and paths followed and pits dug in their entirety, the archaeologists on the St John's Square site only got small insights into the past of the burgh. Even then, those glimpses have provided evidence of activities in areas behind High Street and South Street, and added to the corpus of information on the development of the burgh and the lives people led.



Plate 8 Google Earth view of the current centre of Perth with St John's Square highlighted.



Plate 9: A general view of piles in the snow.

Comparison with other sites

Of the previous archaeological work in Perth (Figure 1), only the Marks and Spencer PHSAE 1975-77 excavation provides a direct comparison with St John's Square in size and scope. The former excavation was c. 832 m² in area and c. 862.55 m³ spoil was excavated but it was dwarfed by St John's Square. There the area of the trenches amounted to c. 3,166.39 m². The piling holes accounted for another 296.31 m² and the amount of spoil excavated was approximately 6,633.08 m³. Only these two, the Perth High Street excavation and St John's Square watching brief, have provided opportunities to examine frontage sites in the centre of the burgh and their backlands. Other excavations along High Street have been either on frontage sites such as King Edward Street (Clark and Blanchard 1995), 80-86 High Street (Moloney and Coleman 1997) and 103 High Street (Roy and Falconer 2000), or in backlands on Mill Street (Brann and McGavin 1995), South Methven Street (Spearman 1987a), and Kirk Close (Blanchard 1987). At the time of

writing, the best comparison, the Marks and Spencer site, remained unpublished until the four fascicules started to appear in print in 2010 (Perry et al. 2010, 2011 and 2012), and only summary results of its fieldwork were available for research (Blanchard 1978; Bogdan and Wordsworth 1978; Bogdan 1980; Bogdan 1992; Murray 1980).

There is also little information from other sites in South Street for comparison with the area of St John's Square facing that street. Only the excavation at the Salvation Army Hall (Stronach 2003) has taken place on the South Street frontage. However, trial excavation and a watching brief at 210-214 South Street on the south side of the street located a probable former frontage line in the form of a stake and wattle fence some 2 m south of the present frontage. Quarry pits and garden soil were also found on the frontage and pottery as early as the twelfth-thirteenth centuries (Cachart 1996).

Buildings

Behind the buildings on High Street, which were set farther back from the present frontage, with a foreland in front, were the backlands to which access was provided by gravel paths. The remains of timber buildings were concentrated in three areas (Figures 8 and 9), the NW (frontage and backland of High Street), SE (frontage and backland of South Street) and in the central north area (backlands of High Street). The evidence from the trenches in these areas included wooden constructional components of posts, post alignments, horizontal timbers, the occasional sill or sill beam, and stake and wattle fences or hurdling. Stone was used as post pads for posts and sills and the occasional stone wall (Trench 26, PEX 58). A mixture of clay and organic matter (often manure) was used to daub stake and wattle to form walls, but also to create the floors of buildings and the bases of hearths. This material 'daub', burnt in building fires, has survived in the archaeological evidence to indicate the occurrence of structures and the superimposition of new buildings above the foundations of older ones (Figure 4), even when organic components such as wood are not present.

The sequence of frontage buildings on High Street with fire destruction levels can be compared to other sites in Perth. At the Marks and Spencer (PHSAE) excavation the two earliest successive buildings on the frontage were destroyed by fire (Blanchard 1978, Murray 2010, 140-141), and similarly at King Edward Street two buildings on the frontage were burnt down (Clark and Blanchard 1995, 932 and 936). At 103 High Street, two frontage buildings also seem to have been also destroyed by fire (Roy and Falconer 2000), but such a sequence was not recorded at 80-86 High Street, directly opposite the Marks and Spencer site (Moloney and Coleman 1997).

Buildings 1 to 3

As far as can be ascertained from the evidence there was a sequence of three wooden buildings on the frontage of High Street (Figures 4, 5 and 8) in Trench 58 (PEX 59). The earliest was burnt down and replaced by another and finally a third, both of which suffered the same fate. The identification of the front and back walls of the buildings determined that the structures were

c. 4.5 m in length and each had a clay floor. The earliest had a gravel foreland, and the later buildings also had frontages extending into High Street. The second building of the three was cut through by a pit after its destruction, which was filled with ash, charcoal, silts and clay before the third building was constructed. Sherds of Scottish Redware and Scottish White Gritty Ware were found in the trench but were not clearly associated with any particular building. A single antler offcut piece also came from the trench.

Buildings 4 and 5

The fourth building was found in the section of Trenches 68 and 69, in the backlands to High Street. It comprised a clay floor bound by stake and wattle walling forming a corner, with an area of charcoal in the floor that might have been the site of a hearth or brazier. At the time of excavation the building was noted as being 30 m back from the street frontage (Figure 8).

A probable fifth building was noted in the same trench. This was identified by a sill beam for its stake and wattle wall. A patch of clay on one side of the wall suggested the building may have been daubed. Pottery from Scottish Redware vessels, Scottish White Gritty Ware pots and Yorkshire vessels came from the trench but were not closely linked to the structures.

Building 6

This structure was found in the south-east corner of the site in Trench 37 (PEX 58) in the backland to South Street (Figure 9). The evidence indicates that it may have had a double stake and wattle wall, one side of which may have been attached to a horizontal timber. It had green clay floors and a hearth as well as the remains of occupation debris. Associated with the structure were two or more gravel paths to its east. Cultural material from this trench included some sherds of Scottish Redware and one of Scottish White Gritty Ware.

Information from the publication of PHSAE may allow slightly better interpretation of the evidence from St John's Square, where wattle was used primarily for backlands buildings up to the end of the thirteenth century. Stone was increasingly used from the second half of that century onwards (Murray 2010 132-5). Double wattle walls, without daub, were uncommon on the High Street frontage but a twelfth century

date was suggested for a possible building of this construction. Sill beams found in Perth and other burghs could date from the late thirteenth century through the fourteenth century in the backlands (ibid).

Although firm interpretation is not possible the following (Table 10) is suggested for the buildings identified on St John's Square:

Building	Suggested dating
1 to 3	The firing of these buildings could be linked with the great fires which affected High Street buildings during the thirteenth century (Murray 2010, 140), and which could account for the replacement of the structures.
	The earliest of these buildings could predate the beginning of the thirteenth century. However, it was replaced twice in quick succession, suggesting the two replacement buildings are also of thirteenth century, perhaps of early fourteenth date. This would not disagree with the structural evidence or the currency of Scottish Redwares and Scottish White Gritty Ware pottery which was not produced by the end of the fifteenth century.
4 and 5	The evidence of the construction of these buildings and the occurrence of Scottish Redwares, Scottish White Gritty Wares and also Yorkshire pottery may suggest they are of similar date to Buildings 1-3 – thirteen to fourteenth century.
6	The evidence for dating this structure is slight, but its double wall construction is unusual in a Perth context, suggesting it could be earlier than the other buildings. However its backland location and the occurrence of Scottish Redwares and Scottish White Gritty Wares perhaps suggest it is a contemporary building dating to the thirteenth or fourteenth centuries.

Table 10: Identified buildings and their suggested date.

Forelands, paths and Meal Vennel

The gravel foreland in front of the earliest frontage buildings, sealed beneath later building frontages (Buildings 1-3 above), can be compared with other sites along both sides of Perth High Street. Similar forelands have been identified at the Marks and Spencer (PHSAE) site (Bogdan 1992, 6) and at 103 High Street (Roy and Falconer 2000) on the north side of the street, and at the corner with King Edward Street (Clark and Blanchard 1995, 936) and at 80-86 High Street (Moloney and Coleman 1997, 716 and 719), both on the south side of the street. There may have been a foreland in front of a timber building at 210-214 South Street (Cachart 1996). They have also been found in other burghs in Scotland: Arbroath (Perry 1999), Dumbarton (Coleman 2004b) and

Dundee (Brown and Roy 2000).

Narrow areas of gravel, interpreted as paths, were found in connection with Buildings 1 to 6, in the same and adjacent trenches (Figures 8-10), but they were more clearly associated with Meal Vennel. Deeper gravel layers either side of a stone wall in Trench 26 (PEX58), were found in a trench which was opened across the present course of Meal Vennel. The evidence could suggest that the vennel was a movable feature, dependent on building plots, and the occurrence of building fires. The stone wall beneath the vennel in Trench 26 could date from the second half of the thirteenth century (see above), but whether the stone wall was a boundary to a property or to an earlier version of Meal Vennel is not known.

Unfortunately, the problem of the origin of Meal Vennel as either a street or an early western limit to the medieval burgh was not resolved by the watching briefs. No trace was found of the possible boundary ditch revealed in the Meal Vennel excavation (Sermon and Cox 1996, 737). The street seems to have been a late (post thirteenth century) insertion into the medieval townscape, occupying the site of former properties on High Street and South Street and providing a direct through route between the two main streets of the burgh.

The High Street and South Street were not metalled roadways in the medieval period. Instead, they seem to have been little more than dirt tracks, with organic rubbish discarded onto them, especially in the earlier centuries of the burgh. The presence of two fences extending under South Street at Meal Vennel may suggest that the north frontage of the street was moved northwards during the fourteenth century.

Trade and industry

The St John's Square faunal material has proved of great interest to the interpretation of craft industries in medieval Perth. Nowhere else in the burgh has such a concentration of red deer antler offcuts been found in archaeological interventions. The evidence suggests two craftsmen were working in the area from the two different types of saw-cuts on the offcuts. One presumably had a workshop on South Street, the other on High Street. Due to the amount of antler offcuts found in Trench 53 (PEX 58) it is apparent

that a workshop, perhaps one producing combs, was located in the backlands of South Street.

As the remains of three successive timber buildings were recorded on the High Street frontage in the same trench as a recovered sawn antler piece (Trench 58, PEX 59), it is likely that one of them was the workshop of a craftsman working with antler. The antler deposits from St John's Square are matched only by an assemblage recovered from Linlithgow High Street (Smith 2015), incidentally a town famed for its leather work.

It seems also that skinning and leather work may have taken place at St John's Square. The craft workshops were probably located close together in the backlands, with the raw materials of the various trades readily available. Traditionally, similar trades were clustered together in the medieval burghs, and it is notable that South Street continued to be home to many of Perth's cobblers until the early modern period, the street being known variously as 'Shoegate' or 'Shaegate' in the eighteenth century (Urquhart 1906, 206; Fothergill 1979, 12). As for the horner craft, there is a vennel named Horner's Lane running northwards from South Street to Canal Street, but there is some dispute as to whether it took its name from a person named Horner (Fothergill 1979, 17). It is however more likely to have been named for the craft itself. Although recent work at the Horner's Plot community garden failed to reach medieval deposits due to the limited footprint of the excavation trench, redeposited medieval pottery indicated activity in this location (Fyles 2015).

Some metalworking debris, including slag, was found on either side of Meal Vennel implying that smelting or smithing took place in the vicinity. The waste materials of metal crafts was found on the western side during both the Meal Vennel excavations, where it was documented from at least the sixteenth century (Sermon and Cox 1996), and potentially as early as the fourteenth century (Photos-Jones and Atkinson 1998, 902), and during the watching briefs on St John's Square, where it was also found on the east side. The slag has not been analysed and evidence for a smithy or other workshop has not been identified. Metallurgical analyses of other slag and metal waste from Perth sites has shown clear

evidence of metal working at Meal Vennel and Canal Street (ibid). At other sites, such as King Edward Street, hearths were present but metal working evidence was less clear.

A thin layer of leather fragments in one of the pits under BHS may be evidence of leather working on the site, although the leather shoes recovered were probably discarded rubbish rather than evidence of leather working (see Thomas above). It is tempting to imagine that the shoes were thrown away when their owners bought new ones in a workshop in the vicinity. The two not very deep pits (c. 0.6 m), with possible timber linings but also found under BHS, may have been used for tanning.

The heckle (CAT 4) and knife (CAT 5) were found in a service trench, Trench 34 (PEX 58), but may not have had close association with each other before being lost or discarded. The wooden handled knife could have had many purposes within the home or in a workshop. However, the heckle was more specific in its function of carding wool or flax and indicates spinning and weaving were most likely being carried out in the St John's Square area as they were on the High Street (Bennett et al. 2012, 7ff), where a number of similar heckle teeth were also found (Franklin and Goodall 2012, 139-143, illus 130).

Environmental deposits

Despite the fragmentary nature of the evidence from St John's Square, it is clear that the environment of this area of the burgh was similar to that encountered on the Marks and Spencer (PHSAE) site at 75-77 High Street. In general, where not truncated by cellars, modern disturbance and building foundations, some 3 m of archaeological deposits survived (Bowler 2004, 51)². It seems that a rapid build-up of organic deposits in the first three centuries of the burgh may have been a deliberate attempt to raise the town above flood levels (Bogdan 1992, 6). The anaerobic soil conditions in the centre of Perth are well documented from previous excavations, ensuring the good preservation of organic remains of wood, straw, moss rope, plants, leather, bone and textile.

2 A detailed discussion of the depth of deposits and their survival has not been included here but more information on this can be found in the site archive.

Backlands have been excavated on the south side of South Street (Blanchard 1983; Spearman 1987b; Burrows 1996) where the results suggest that they were generally undeveloped during the medieval period, being used mainly for pits, middens and gardens. In addition, trial excavation on the north side of the street at 153-155 South Street revealed a deep garden soil (Hall 1992). Soil conditions in this street are generally less well suited for the preservation of organic remains, except in deep waterlogged conditions. However, organic deposits and garden soil survived reasonably well in the backlands of the SE corner of St John's Square along with wooden buildings, yards and pits.

Midden versus garden soil

An earlier theme of this discussion was the composition of waterlogged organic deposits often referred to as midden (strictly speaking midden is organic waste), and garden soils usually directly overlying middens recorded in the backlands of both High Street and South Street properties. Garden soils in excavations in St Andrews, Fife are a regular occurrence and have been discussed by Rains and Hall (1997, 142-3), Moloney and Baker (2001) and reassessed by Carter (2001). Deep organic deposits or middens containing wooden structures and organic artefacts, and therefore evidence of complex settlement remains, have been recorded at many sites in Perth and Aberdeen but also in Edinburgh and Leith (Holdsworth 1987; Bowler et al. 1995; Murray 1982; Cameron and Stones 2001; Schofield 1976; Stronach 2003).

Midden and garden soils are often believed to be different and distinct deposits in urban excavations and are treated as such. This was perhaps reinforced by the idea that deep and homogenous garden soils were deliberately imported into many Scottish towns in the late medieval period as economic decline forced urban land into cultivation. Carter (2001) proposed an alternative interpretation of garden soils as occupation deposits, and that garden soils and midden are in fact the same material. The difference between them is not their land-use history (complex settlement remains versus cultivation) but the processes which have affected the sediments since their deposition.

The occurrence of garden soil always overlying

midden at St John's Square, adds considerable weight to Carter's interpretation that garden soil is merely dried out, well worked (animal, human and biological) organic deposits. Where organic deposits lie below garden soil in Perth, they are still essentially waterlogged and unaffected by natural or human action, such as changes in the water table. They are, however, a precious archaeological resource, which is at particular risk when the finely balanced hydrology regimes in which they exist are altered, for example, by piling.

If garden soil is merely dried out organic deposits there are clearly implications for future archaeological excavation strategies. The depths of garden soils at St Johns Square are not therefore evidence of backlands turned over to cultivation but instead complex remains of buildings and occupation indicative of a thriving settlement, which affects our understanding of the growth and development of Perth, but also other burghs during the medieval period.

Conclusions

St John's Square was a 'rescue' intervention in the broadest sense of the word. The archaeologists managed to record and recover what they could under testing and hazardous circumstances, but it was an exercise we hope will not be repeated in urban environments again where deposits of human occupation can be deep and complex and full of information.

The watching briefs had shortcomings that could not be avoided. Few organic remains were collected for botanical analysis, for species identification or for the identification of tool marks on wood, etc. Today, these would be a matter of general archaeological methodology as well as the collection of samples for the scientific analysis of clays and organic sediments. Micromorphological analysis of middens and garden soil could test the hypotheses of their development and also provide data to compare with other urban burghs, such as St Andrews. Radiocarbon dating of materials from St John's Square was also lacking because suitable materials could not be collected. They would have helped considerably in the dating of the structures and activities on the site, and in the understanding of the changes in development of the burgh and its buildings over time.

The implications of the results of the archaeological work at St Johns Square indicate that there is great potential for further research when the opportunities arise in the medieval burgh of Perth. The watching briefs showed us that the research questions need to be answered on a much bigger scale than a restricted pile hole or narrow trench, but information was gained for all that, and it was information that otherwise would have been lost for ever.

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Appendix 1: Table 1: Pottery fabric analysis

WatchingBrief/ Trench	Scottish Redware	Scottish White Gritty ware	Yorkshire	Earthenware	Unidentified	Stoneware	Scottish Post- Medieval Oxidised Ware	Scottish Post- Medieval Reduced Ware	Low Countries Redware	Reinisch Stoneware	Modern	Totals
PEX 55												
u/s	1											
Subtotal	1											1
PEX 58												
1	3											
2	20		1	1								
4	3			1								
5	2	1										
7	2											
10	6											
14	3											
20	25		1									
23	17	6	8		3							
24	178	12	8		1							
26	15	11	1		2							
27	9	1		9								
30	5	2				1						
31	8	1					1					
33	3	7										
34	2	6			14							
35	3	2	1		1							
37	8	1										
38	11	5	4	2	2							
40	1							1				
45	1	1										
51	13		1									
54					1							
57	2											
58	1	1	1									
60	19	11	1		2							
64	1											
66	1								1			
68	6	2	1									
69	5	1	1		1							
73	1		2									
75	1			1								
76	4											
78	16	8	20									
79	1	1										
80	1											
83										1		
85								1			2	
86					1							
92	3	1							1			
93	5	2	1		1							
94	1											
95	5		1									
96	1											
Subtotal	389	83	53	14	29	1	1	2	2	1	2	577

WatchingBrief/Trench	Scottish Redware	Scottish White Gritty ware	Yorkshire	Earthenware	Unidentified	Stoneware	Scottish Post-Medieval Oxidised Ware	Scottish Post-Medieval Reduced Ware	Low Countries Redware	Reinish Stoneware	Modern	Totals
PEX59												
2	1											
10				12		1						
11	1	1										
14	2			3							1	
15			1									
17	2											
18			1									
19	1		2		1							
20	13	10		2	1							
25	1											
29	1											
30	1	1	1	7		1					3	
35	1	1	1		3							
36	1	1	1									
37		1										
38	3											
39	15	7							2			
47	1											
49		2										
58	17	8			1							
59	4		1									
62		1										
65	1											
67						2						
71		2										
74	1											
Subtotal	67	35	8	24	6	4		0	2	0	4	150
Grand Total	457	118	61	38	35	5	1	2	4	1	6	728

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